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Finanční analýza společnosti Magna International

Financial Analysis of Magna International Company

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1. Introduction
2. Description of the financial analysis methodology
3. Characterization of Magna International Inc.
4. Financial analysis of the selected company
5. Conclusion

Bibliography
List of Abbreviations
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"Herewith I declare that I elaborated the entire thesis, including all annexes, independently."

Ostrava dated 3rd May, 2013

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Contents

1 Introduction

The quality of human being's life has changed a lot due to the rapid development of automotive technology especially in the area of automotive suppliers.

Taken what mentioned above into account, this thesis will introduce one of the most diversified automotive suppliers in the world, which is called Magna.

The main objective of the thesis is to use some financial analysis methods to analyze selected company's balance sheet, cash flow and income statement from the year 2007to 2011.

In chapter 2, the methods of financial analysis used in this thesis will be described. There are two main parts in this chapter: one is common-size analysis, the other is financial ratio analysis. The purpose of using common-size analysis is to have a general understanding of the company's financial structure and its development trends. The financial ratio analysis pays attentions to three main areas such as activity ratio, liquidity analysis and solvency analysis. We can know this company much more and deeper in this chapter.

In chapter 3, the general introduction about Magna's facts and history, innovation and responsibility will be followed closely. As a good analyzer, knowing the company comprehensively is needed. From all of this, we can have a general understanding of the situation of the company.

Chapter 4 is the practical part and also the most important part in this thesis. In this chapter, the company's performance from year 2007 to 2011 will be analyzed comprehensively from Balance Sheet, Income Statements and Cash Flow Statements of the company. Exactly, the data we use in this chapter will follow the company's

annual reports. As the most important part, all methods that will be used is necessary to be introduced: the common-size analysis will be used to show the general situation of the financial statement of the Magna International Inc. And then we will pay attention to the financial ratio analysis, which enables to spot trends and compares its conditions and performances of similar businesses in the same industry among the given 5 years. In the liquidity analysis, the current ratio and quick ratio will be used to measure the liquidity of the company's ability to meet its short-term liabilities. Then we will use solvency analysis to measure the company's ability to meet its long-term liabilities. In the end, we will use profitability analysis, DuPont analysis and influence quantification to examine the ability to generate profit from invested capital in the form of return during a period of the company in more detail.

In chapter 5, we will go back to the thesis and have an overall look at all the data or figures we did and then get the conclusion about this company's past and present situation and also the suggestion about the company's future will be included.

2 Description of the Financial Analysis Methodology

As an analyst to analyze a corporation, the first step is to gather data which should be from the company's balance sheet, income statement, and cash flow statement and so on. And then, the financial information we got can be compared to the industry over a period of time to measure its performance and financial position within a given period. The methods of financial analysis will be described as follows:

- Common-size analysis,
- Financial ratio analysis,
- DuPont analysis,
- Analysis of gradual changes.

The main information source for this chapter is from the text book by Gary (2003).

2.1 Common-size analysis

Which method is a way of comparing either financial statements of different-sized companies or financial statements of one company from different time periods? Common-size analysis is the process to show you how to do that. The aim of common-size analysis is to identify the trends and major differences. Brief financial statements about a company in the industry for several years can provide a useful overview of the company's operating performance and its financial health condition. Common-size analysis can be applied as a useful springboard for a company's operations and financial position.

A useful way to analyze financial statements is to carry out either a horizontal analysis or a vertical analysis of the statements. These two types of analysis can help a financial statement reader compare companies of different sizes. The horizontal and vertical analysis approaches are similar in that the dollar amounts stated are converted

into percentages. However, the approaches differ in the base used to calculate the percentages.

2.1.1 Vertical analysis

Just as its name implies, vertical analysis is one of analytical methods, which can be used in analyzing the financial data of a company. In the financial statements table, the purpose of this method is to compare each item from the statement with overall total, in order to draw the project location, importance and changes in the overall.

Vertical analysis is also called as the common ratio analysis, which is opposed to horizontal analysis. Horizontal analysis focuses on key trends, according to the comparison of different years. However, vertical analysis pays much more attention to the statement within each item internal structure analysis. This method just do vertical analysis on income statement or balance sheet of the current period, and all balance sheet items are regarded as a percentage of total assets and all income statement items as a percentage of sales or total revenues.

The process of vertical analysis is, first of all, to calculate the all items in the table in the overall proportion. Secondly, we can easily tell which item is the most important to the company based on the proportion in the statement. In the end, we can use the proportion data to make a comparison between different periods to observe the trend of changes.

2.1.2 Horizontal analysis

A horizontal analysis provides a way to compare numbers from one period to the next, using financial statements from at least two distinct periods. Each line item has an entry in a current period column and a prior period column. In business, horizontal analysis refers to a type of fundamental analysis in which a financial analyst uses certain financial data to assess a company’s performance over time. We can also

comparethe same items or ratios for a particular company over a period of time in order to assess the company's growth during that time. Horizontal analysis can also be performed on multiple companies in the same industry, to assess a company's performance relative to its competitors.

The data used in horizontal analysis is found in a company's financial statements, which include the balance sheet, income statement, and statement of cash flows. It can be line items, such as expense items, or it can be a ratio. A ratio is determined by comparing two or more items, for example, dividing expenses by net sales to determine the operating ratio[1].

2.2 Financial ratio analysis

Calculation of financial ratios is the central to financial analysis. A ratio is comprised of a numerator and a denominator, so that means a ratio should be expressed as a percentage. It is also one of the most important approaches to standardizing financial information for useful comparisons. The main ratio categories can be described as follows:

- Liquidity ratios,
- activity ratios,
- leverage ratios,
- Profitability ratios.

Each ratio provides a somewhat different analysis. Thanks to financial ratio represents the latest financial data available, it becomes the most important for the most recent year. And it will be clearly and directly known how good or bad a company is as a ratio.

[1]http://baike.baidu.com/view/1462442.htm

2.2.1 Liquidity ratios

Does the company have the cash or any other current assets to pay liabilities when they come due? Most current assets are transferred to cash and most current liabilities are paid in cash when due. Generally, current marketable securities are investments of excess cash into liquid debt securities to earn a return until the cash is needed for operations. Marketable securities are regarded as cash (or near cash) for analysis. In most cases, relatively large cash balances are defined as good news.

Working capital can be explained as the net current assets (total current assets – total current liabilities). This is also one measure which belongs to liquidity. Let's put in this way, imagine working capital is negative, it will be a potential red flag since cash and other current assets are needed to pay current obligations.

In one word, liquidity ratios could be the way to measure a company's ability to meet its immediate and short-term obligations.

The current ratio

It is a standard ratio to evaluate working capital. Generally, a firm's current assets are converted to cash (e.g., collecting on accounts receivables or selling its inventories) and this cash is used to retire its current liabilities. Therefore, it is logical to assess its ability to pay its bills by comparing the size of its current assets to the size of its current liabilities. The current ratio does exactly this. It is defined as

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}. \tag{2.1}$$

Obviously, the higher the current ratio is, the higher the possibility that a firm will be able to pay its bills. So, from the creditor's point of view, higher is better. However, from a shareholder's point of view this is not always the case. Current assets usually have a lower expected return than fixed assets, so the shareholders would like to see

that only the minimum amount of the company's capital is invested in current assets. Of course, too little investment in current assets could be disasters for both creditors and owners of the firm.

The quick ratio

This ratio eliminates inventory and other current assets from the denominator, focusing on "near cash" and receivables have to be taken into account. And inventories are often the least liquid of the firm's current assets. For this reason, many analysts believe that a better measure of liquidity can be obtained by ignoring inventories. The result is known as the quick ratio (sometimes called the acid-test ratio), and is calculated as

$$\text{Quick Ratio} = \frac{\text{Cash} + \text{Marketable Securities} + \text{Net Receivables}}{\text{Current Liabilities}}. \qquad (2.2)$$

The cash ratio

It is the ratio of a company's total cash and cash equivalents to its current liabilities. The cash ratio is most commonly used as a measure of company liquidity, and is calculated as

$$\text{Cash Ratio} = \frac{\text{Cash} + \text{Marketable Securities}}{\text{Current Liabilities}}. \qquad (2.3)$$

The higher the cash ratio is, the more useful for creditors when deciding how much they make a debt.

2.2.2 Activity ratios

Activity or turnover ratios are measures of efficiency of a company, so generally, the higher the better. Typically, the numerator is an operating measure such as sales (revenues) or cost of goods sold and the denominator is a balance sheet measure such as inventory or receivables. Thus, operating flows are measured against asset and

other levels. Time series trends and comparisons to other companies are useful to spot red flags or potential opportunities. Common activity ratios are shown as follows.

Inventory turnover

It is a ratio that shows how many times a company's inventory is sold and replaced over a period. And then the days in the period can be divided by the inventory turnover formula to calculate the days it takes to sell the inventory on hand or "inventory turnover days". It is calculated as

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold(COGS)}}{\text{Average Inventory}}. \qquad (2.4)$$

This ratio should be compared against industry averages[2]. Actually, from this formula, a low turnover means poor sales, so we need to excess inventory. On the other hand, a high ratio shows either strong sales or ineffective buying.

High inventory levels are unhealthy because they represent an investment with a rate of return of zero. So it may cause the company trouble and the price of goods begins to fall.

Receivablesturnover

In financial analysis, analysts prefer to use this method to measure the effectiveness of credit policies and needed level of receivables investment for sales. They also call this method as collection period.

$$\text{Receivables Turnover} = \frac{\text{Sales}}{\text{Average Accounts Receivable}}. \qquad (2.5)$$

From the formula that is mentioned above, a high ratio implies either a company operates on a cash basis or its extension of credit and collection of accounts receivable is efficient. Oppositely, a low ratio means the company should re-evaluate its credit

[2]http://www.investopedia.com/terms/i/inventoryturnover.asp

policies in order to ensure the timely collection of imparted credit which is not earning interest for the company anymore.

Payables turnover

Firstly, payables actually represent a financing source for a company's operating activities. The measure shows investors how many times per period the company pays its average payable amount. The calculation is

$$\text{Payables Turnover} = \frac{\text{Sales}}{\text{Average Accounts Payables}}. \tag{2.6}$$

If the payables turnover ratio is going down from one period to another, this is a sign that the company is spending much longer at paying off its suppliers than it was before. The opposite is true when the ratio is going up, which means that the company is paying off suppliers at a faster rate.

Working capital turnover

A company uses working capital (current assets-current liabilities) to fund operations and purchase inventory. These operations and inventory are then transferred to sales revenue for the company. The working capital turnover ratio is a ratio which can be used to analyze the relationship between the money used to fund operations and the sales generated from these operations. In one word, it measures how much working capital or operating capital is needed for sales. The calculation can be written as

$$\text{Working Capital Turnover} = \frac{\text{Sales}}{\text{Average Working Capital}}. \tag{2.7}$$

In a general sense, the higher the working capital turnover is, the more sales the company is generating compared to the money which is used to fund the sales.

Fixed-asset turnover

The fixed asset turnover ratio measures a company's ability to generate net sales from fixed-assets investments such as specifically property, plant and equipments. The

fixed-asset turnover is calculated as:

$$\text{Fixed Asset Turnover} = \frac{\text{Sales}}{\text{Average Fixed Assets}}. \quad (2.8)$$

When a company makes large purchases, the investors will look forward to watching this ratio in following years to know how effective the investment in the fixed-assets was. Or in other words, a higher fixed-asset turnover ratio shows that the company has been more effective in using investments in fixed assets to make revenues in last several years (periods).

Total asset turnover

Like the other ratios discussed in this section, the total asset turnover ratio represents the overall efficiency of assets to sales. This ratio is more useful and easier for a growth company check if in fact they are growing revenue in proportion of sales. And the formula should be:

$$\text{Total Asset Turnover} = \frac{\text{Sales}}{\text{Average Total Assets}}. \quad (2.9)$$

It is easy to tell that the higher the ratio is the better for a company. It also indicates pricing strategy: a company with high profit margin tends to have low asset turnover, while those with low profit margin have high asset turnover.

2.2.3 Leverage ratios

Leverage (also called solvency) has a view of the capital structure of the company and the evaluation of the relative risk and return which is associated with liabilities (especially long-term debt) and equity (or ownership). It is also a ratio which is used to measure a company's mix of operating costs, giving an idea of how changes in output will affect operating income. Fixed and variable costs are the two types of operating costs; depending on the company and the industry, the mix will be different.

Common leverage ratios are shown below. Debt is defined as total liabilities, because it is easy to determine and compare across companies.

Debt to assets ratio

It is an indicator of the proportion of a company's assets that are being financed with debt, rather than equity.It can be calculated as:

$$\text{Debt to assets} = \frac{\text{Total Liabilities}}{\text{Total assets}} \tag{2.10}$$

A ratio greater than 1 also indicates that a company may be putting itself at risk of not being able to pay back its debts, which is a particular problem when a business is located in a highly cyclical industry where cash flows can suddenly decline. Possible requirementsby lenders to counteract this problem are the use of restrictive covenants that force excess cash flow into debt repayment, restrictions on alternative uses of cash, and a requirement for investors to put more equity into the company.

Debt to equity

This ratio is a direct comparison of debt to equity stockholders and the most common measures of capital structure. It also shows what proportion of equity and debt the company is using to finance its assets. The calculation formula can be described as:

$$\text{Debt to Equity} = \frac{\text{Total Liabilities}}{\text{Total Stockholders' Equity}}. \tag{2.11}$$

A high ratio generally means that a company has been aggressive in financing its growth with debt. This can result in volatile earnings as a result of the additional interest expense.

Long-term debt to equity

What is the main difference between long-term debt to equity and debt to equity is long-term debt to equity is a long-term prospective of debt and equity positions of stockholders. And Long-term debt-to-equity ratio equals total long-term debts divided by total equity that can be written as:

$$\text{Long Term Debt to Equity} = \frac{\text{Long term Liabilities}}{\text{Total Stockholders' Equity}}. \quad (2.12)$$

2.2.4 Performance (Profitability)

As we all know, if a company wants to make an investment decision, profit must be the most criterion to be taken into account. The most significant predictor of company market valuation is profitability. Some examples of profitability ratios are gross margin, return on sales, and return on assets, pretax return assets and dividend payout. For most of these ratios, having the same ratio from a previous period or higher value relatively to a competitor's ratio means that the company is doing well.

The different types of ratios that are mentioned above are described in detail as follows.

Gross margin

It is expressed as a percentage of the relationship between sales and manufacturing costs, which is also called the gross profit margin. The gross margin shows the proportion of the total sales revenues that the company retains after producing good or services. And the formula should be:

$$\text{Gross Margin}(\%) = \frac{\text{Sales} - \text{COGS}}{\text{Sales}}. \quad (2.13)$$

The higher the ratio is, the more profit the company made.

Return on sales (ROS)

It is a ratio which is widely used to evaluate a company's operational efficiency. Some analysts regard ROS as a company's "operating profit margin", which can clearly let investors know about the company's operational activities. It is calculated using this formula:

$$\text{Return on Sales} = \frac{\text{Net Income}}{\text{Sales}}. \tag{2.14}$$

If ROS is increasing, it means the company is growing more efficient. Oppositely, if ROS decreases, the company must be facing some trouble.

Return on assets (ROA)

If you want to know how efficient by using a company's assets to generate earnings, ROA is the first choice to show you the relationship between net income and average total assets. Sometimes, it is referred as "return on investment". The formula for return on assets is:

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Average Total Assets}}. \tag{2.15}$$

If the ROA is increasing, it means that the company is earning more money on less investment.

Pretax return on assets

It can indicate how profitable a company is relative to its total assets. The calculation formula is:

$$\text{Pretax Return on Assets} = \frac{\text{EBIT}}{\text{Average Total Assets}}. \tag{2.16}$$

From this ratio, the higher the more profits the company made.

Return on total equity

The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. The calculation formula is:

$$\text{Return on total equity} = \frac{\text{Net income}}{\text{Average total stockholders' equity}}. \qquad (2.17)$$

Net income is for the full fiscal year (before dividends paid to common stock holders but after dividends to preferred stock.) Shareholder's equity does not include preferred shares.

2.3 DuPont Analysis

The DuPont analysis is expressed as ROE (return on equity) which is broken into three parts, such as profitability, activity and solvency. The purpose of this analysis is to consider interrelated aspects of important financial ratios and evaluate the different levels to overall financial analysis.

Firstly, let's take a look at the return on assets (ROA):

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}} = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}}. \qquad (2.18)$$

So, the ROA shows the combined effects of profitabilityand the efficiency of assets (the total asset turnover).Therefore, the ROA could be improved by increasing profitability through expensereductions, or by increasing sales relative to total assets.

The return on equity (ROE) ratio is a measure of the rate of return to stockholders. The simple formula can be expressed as:

$$\text{ROE} = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Equity}}. \qquad (2.19)$$

The ROE is useful for comparing the profitability of a company to that of other firms in the same industry. There is a very interesting phenomenon that normally a new company's ROE is high at the beginning of several years, but as time goes by, ROE starts to go down[3]. The reason why is because with time going by, the company is getting bigger and bigger, which lead to a bigger net asset, so the regulator of the company need to start to produce new products or try to survive in new area. In one word, if a big company with a long history and still can have a stable or high ROE, it means the company is very strong and the regulator has the ability to lead the company to success.

2.4 Analysis of gradual changes

It enables to quantify the change in the basic ratio which is caused by change in the component ratio. And it should be decomposed into three component ratios. The formula can be written as:

$$\Delta x_{a1} = \Delta a_1 * a_{2,0} * a_{3,0},$$

$$\Delta x_{a2} = a_{1,1} * \Delta a_2 * a_{3,0},$$

$$\Delta x_{a3} = a_{1,1} * a_{2,1} * \Delta a_3. \qquad (2.20)$$

In this formula, we need to know that x means the basic ratio, Δx is the absolute change in the basic ratio, "a" is component ratio and "Δa" is the absolute change in the component ratio.

[3]http://baike.soso.com/v7536603.htm

3 Characterization of Magna International Inc.

This chapter mainly introduces some basic information about Magna, such as its history, current situation and future, industry environment, main competitors and situation in China.

3.1 History, current situation and future

Considering the Magna's history or process of becoming successful.A simple historical line which some important years or periods are highlighted[4] will be shown as follows.

3.1.1 Foundation and short history

Nowadays, people would say this is a "Setting up Shop" period because Frank Stronach opened a one-man tool and die shop called Multimatic in 1957. And in 1959, Magna received its first auto contract with General Motors to produce metal-stamped sun visor brackets.

In 1960, the second plant was opened in Richmond Hill, Ontario. After two years, which means in 1962, Magna Electronics Corporation Limited became a public company on the Toronto Stock Exchange under the symbol MG. In 1965, Canada and the US signed the historic auto pact, which removed tariffs on automobiles and automotive parts, and they shipped their first parts to the US- a drip rail for Ford Motor Co.

1970s is an important period that Magna had a try to make changes or make it more competitive in the industry. From 1970 to 1972, automotive operations expanded to include a greater number of stamped and electro-mechanical components. In 1973, Magna Electronics Corporation Limited changed its name to Magna International Inc.

[4]http://www.magna.com/capabilities/body-chassis-systems/about-cosma/history

And in 1975, Magna started to introduce the employee equity and profit participation plan which was very helpful for workers and led Magna to success. During the period between 1976 and 1979, Magna implements a major product diversification strategy and divisions were organized into group and especially in 1979, Magna developed the revolutionary single belt pulley system and entered the automotive plastics business.

In 1980, Magna began manufacturing reaction injection moundedbumpers (RIM). And Magna sold its aerospace and defense operations in 1981. In 1983, Magna developed an industrial campus and opened an employee park. In 1985, Magna won a breakthrough contract to supply Class 1 exterior sheet metal for an American Motors vehicle. In 1986, Magna became the first company to supply Co-Extruded technology to the North American Marketplace. At the end of this period, Magna co-designed and co-developed the integrated child safety seat, which was recognized by Smithsonian Institute as one of the great innovations of the 1980's.

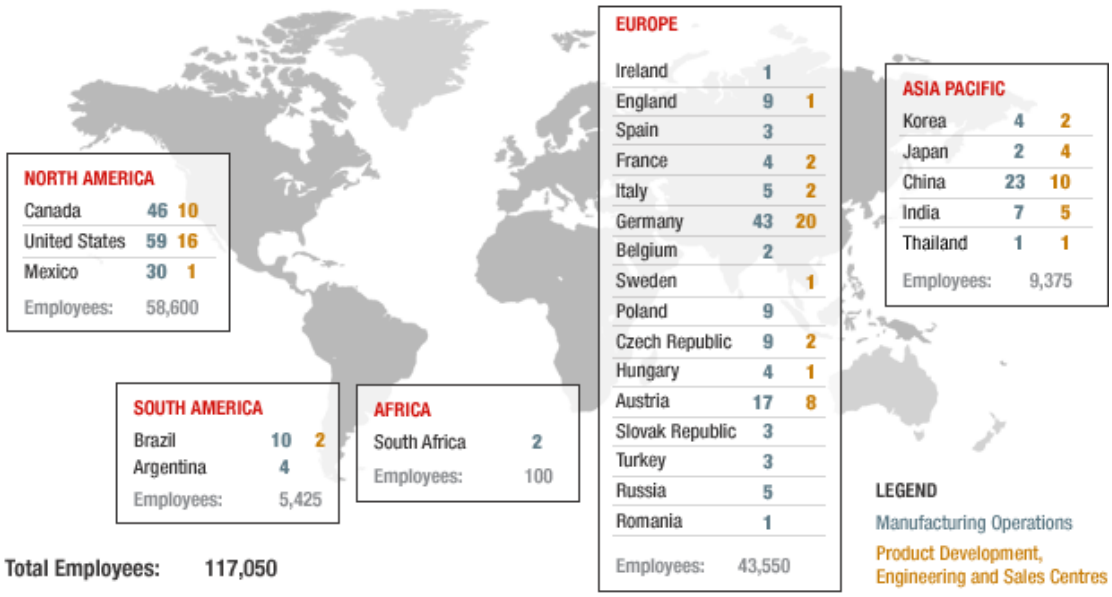
In 1994, Magna announced a groundbreaking system integrator contract to program-manage the complete interior and exterior systems integration of a vehicle. From 1996 to 1998, Magna underwent a major European expansion, acquiring a number of European-based automotive systems suppliers. In 1999, Forbes Magazine named Magna the world's top Auto Part Company. Magna structured its operating groups along global product lines.

In 2001, Magna announced the formation of its Magna Steyr group, the world's premier supplier of total vehicle engineering and one of the world's leading suppliers of niche vehicle assembly and concept development. In 2008, Magna announced the development of an electric vehicle and became the largest automotive parts supplier in North America on the basis of sales.

3.1.2 Current situation

After introducing you Magna's history, it would be more interesting to know what the Magna current situation is. Firstly, a worldwide map should be taken into account. Here is

Picture 3.1 Worldwide map



Source:http://www.magna.com/global-reach

Until now, Magna has a global presence in order to support its customers on a worldwide basis, consisting of 296 manufacturing operations and 88 product development, engineering and sales centers in 26 countries on five continents.

Secondly, taken the 2012 annual report of MGA into account, the MGA is a leading global automotive supplier with 313 manufacturing operations and 88 product development, engineering and sales centers in 29 countries. Its 119,000 employees are focused on delivering the best value to its customers through innovative processes and World Class Manufacturing. Its product capabilities include body, chassis, interiors, exteriors, seating, powertrain, electronics, vision systems, closures and roof systems and modules, as well as complete vehicle engineering and contract manufacturing.

Here are some typical products which can help you know clearer about the Magna International Inc. For example, interior mirrors (prismatic and electronics), exterior mirrors, actuators, electronic vision systems and door handle. The pictures as follows can be more helpful to know what the products are.

Picture 3.2 Main products

Source: http://www.magna.com/search?q=products

In the end, let's have a look at the MGA's vision, in recent years, MGA aims to be its customers' preferred global partner for the automotive industry, by delivering the best value built on innovative products and processes and World Class manufacturing. They strive to be the employer of choice, ethical and responsible corporate citizen and a superior long-term investment for their shareholders.

3.2 Industry environment in Canada

Until 2012, Canada's auto industry has survived perhaps the most turbulent decade in its history. Despite significant downsizing, violent uncertainty, and significant barriers thrown up in its way (chief among them a distorted exchange rate which makes every dollar in cost appear 25 percent larger than it is), the industry isstill here. And it still

makes a crucial, disproportionate contribution to Canadian incomes, productivity, innovation, and exports. Dire talk about Canada's loss of competitiveness relative to the U.S. (and other industrialized jurisdictions) is not justified by real-world factual analysis. In fact, even at current overvalued market exchange rates, Canada demonstrates no unitlabor cost disadvantage relative to counterpart facilitiesin the U.S. However, the continuinglopsided evolution of automotive globalization, whereby increasingly aggressive companies seem to be willing to sacrifice workers and entire communitiesin a continuing race to the bottom, certainly poses a continuing threatto our industry and the many stakeholders who depend on it.In this regard, it is the unfettered rise of low-cost export platforms (currently including Mexico, but soon to include Thailand, China, and others) that poses a particularthreat;so too does Ottawa's misguided policy of willy-nilly signing new free trade agreements, including with jurisdictions (like the EU, Japan, and Korea) with which our automotive trade relationships are already precariously unbalanced[5].

3.3 Main Competitors

Table 3.1 Main competitors and industry leverage data

Company	MGA	AKN	DNO	Leverage
ROE (%)	16.15	12.56	9.73	21.20
Long-term debt to equity	4.57	33.26	22.51	71.63
Net profit margin	4.37	2.20	6.30	5.20

Source:http://biz.yahoo.com/p/333conameu.html

Firstly, MGA is the abbreviation of Magna International Inc. and ANK represents Aisin Seiki, DNO means Denso Corporation. And then, let's have a look at the ROE among these main competitive companies and industry leverage. It is obvious to see MGA has the highest ROE ratio by 16.15 percentage points, which means MGA

[5]Canadian Auto Workers Union April 2012.

makes a higher profit compared to its main competitors. However, AKN has the highest long-term to equity ratio, it can tell us AKN is under much pressure to repay it long-term debt. It is good news for MGA because it only has 4.75 long-term debts to equity. In the end, let's look at the profit margin, the leverage ratio is 5.20, the highest ratio is from DNO by 6.30, even higher than industry leverage, so it means the DNO has much more effective to convert revenue into its actual profit.

Generally, Magna is a very good company which can make a higher profit in the industry, doesn't have too much pressure to repay its long-term equity and is effective to convert revenue into its actual profit.

3.4 Magna activities in China

On March 21, 2013 in Zhang Jiagang, China, Magna International Inc. announced that its Magna Electronics operating unit held a ceremony today to celebrate the start of a new automotive camera production line at its Zhangjiagang plant in China. The facility will produce ReversAid™ cameras, which provide drivers with an undistorted rear view of the vehicle while in reverse.

In addition, later this year the plant will add a production line for its forward facing imaging modules, which assist drivers by automatically reacting to certain driving situations. Both products come from Magna Electronics' EYERISTM global product line, a comprehensive portfolio of innovative and intelligent driver assistance systems.

"Magna Electronics has been developing advanced driver assistance systems for many years. The startup of these production lines is a great introduction of EYERIS to the Chinese market and demonstrates our capabilities in delivering innovative technologies our customers expect," said Olaf Bongwald, Vice President, Magna Electronics, at the celebration ceremony.

Magna Electronics (Zhangjiagang) Co., Ltd facility, formerly known as Magna Suxing Electronics (Zhangjiagang) Co., Ltd., has approximately 100 employees and supplies components and systems to Ford, General Motors, Honda, Fiat, Geely and

Great Wall.

Let's have a look at the history about MGA's strategy in China, on August 5, 2011, Magna Exteriors and Interiors, an operating unit of Magna International Inc., announced today that it has expanded its footprint in China by forming a joint venture to purchase an existing injection molding and painting facility located in Wuhu, a city in the Anhui province of southeastern China.

Like a coin has two sides, as a developing country, making investments in China is a challenge for Magna, but it is also a good opportunity to broaden the market and make profits.

4 Financial Analysis of the Selected Company

In this chapter, the methods introduced in chapter 2 will be used to analyze Magna International Inc. The data, tables and charts will be shown in this chapter. After everything's finished, we can clearly notice Magna International Inc.'s financial performance or position in industry and predict its future development. All calculation are carried out based on data in annexes (Annexes 1-3).

4.1 Common-size analysis

In this part, we will divide common-size analysis into two parts, vertical common-size analysis and horizontal common-size analysis.

4.1.1 Vertical common-size analysis

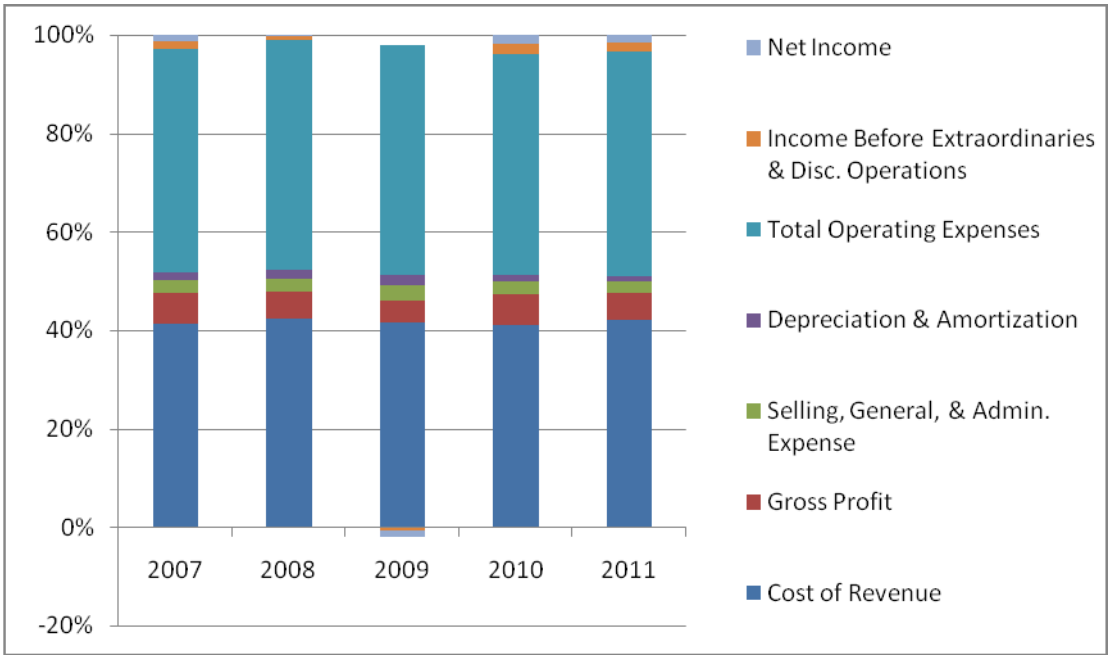
Firstly, let us pay attention to the shorter version of Magna International Inc.'s income statement from 2007 to 2011.

Table 4.1 Vertical common-size analysis of income statement

Year	2007	2008	2009	2010	2011
Cost of Revenue	86.7%	88.5%	90.4%	86.8%	88.3%
Gross Profit	13.3%	11.5%	9.6%	13.2%	11.6%
Selling, General, & Admin. Expense	5.6%	5.6%	7.3%	5.6%	4.9%
Depreciation & Amortization	3.3%	3.7%	4.2%	2.7%	2.4%
Total Operating Expenses	95.6%	97.8%	101.9%	95.1%	95.7%
Income Before Extraordinary& Disc. Operations	3.2%	1.6%	-1.7%	4.2%	3.8%
Net Income	2.5%	0.3%	-2.8%	4.0%	3.5%
Total Revenue	100.0%	100.0%	100.0%	100.0%	100.0%

We can easily tell this company makes a profit during this period except in 2009 from this table. Generally, the cost of revenueis relatively stable and represents a big part of all revenues more than 85 percentage during these 5 years.The cost of revenue in 2009 is higher than any other 4 years, which absolutely results in the decrease of the gross profit in the same year. Total operating expenses in the first 3 years keeps increasing from 95.6 percentage points to 101.9 percentage points. The rest 2 years, we can see the total operating expenses starts going down to be more stable. Finally, we can get the number of net income which is 2.5 percentage of total revenue in the year of 2007, but from 2007 to 2009, it keeps decreasing and especially in 2009 it is only -2.8 percentages which means the company makes a loss. We may wonder know why such a big and stable company made a loss in 2009. The main reasonis the worsening of economic and industry conditions which became apparent in the second half of 2008. The financial crisis accelerated the deterioration in the financial condition of a number of OEMs and suppliers, culminating in the bankruptcy filings of Chrysler and General Motors in April and June, respectively[4].

Chart 4.1 Vertical common-size analysis of income statement



[4]Magna International Inc. Annual Report.

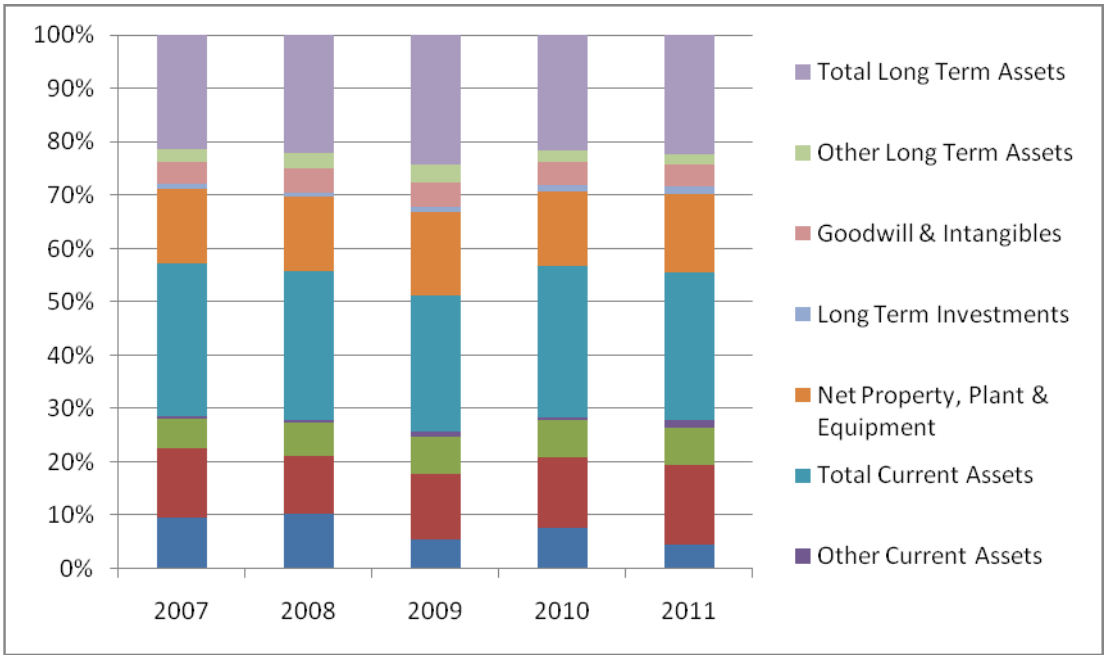
From chart 4.1, it is very clear to see the proportion of each item of revenues have changed in the 5 years. Just like what mentioned above, we can easily find the company makes a loss in 2009. But after 2009, it is very hard to tell the difference between 2010 and 2011, which means the company,starts to make profits stably and healthily again in these two years.

As the same way we did in last case, we can easily get the common-size balance sheet case which is stated as follows.

Table 4.2 Vertical common-size analysis of balance sheet (assets)

Year	2007	2008	2009	2010	2011
Cash & Short Term Investments	19.3%	20.9%	10.8%	15.1%	9.0%
Receivables	26.0%	21.4%	24.9%	26.8%	30.0%
Inventory	11.0%	12.5%	14.0%	13.6%	13.9%
Other Current Assets	1.0%	1.0%	1.5%	1.2%	2.6%
Total Current Assets	57.2%	55.7%	51.2%	56.8%	55.5%
Net Property, Plant & Equipment	28.1%	28.1%	31.0%	28.0%	28.9%
Long Term Investments	1.8%	1.5%	1.9%	2.0%	3.0%
Goodwill & Intangibles	8.1%	8.8%	9.2%	8.8%	8.1%
Other Long Term Assets	4.9%	5.9%	6.7%	4.5%	4.0%
Total Long Term Assets	42.8%	44.3%	48.8%	43.2%	44.5%
Total Assets	100.0%	100.0%	100.0%	100.0%	100.0%

Chart 4.2 Vertical common-size analysis of balance sheet (assets)



In table 4.2, it shows the proportions of selected asset items on total assets. Obviously, the largest proportions are receivables, net property, plant and equipment over the whole period from 2007 to 2011. As we can see, nearly all items are stable compared to total assets, such as goodwill and intangible assets. Even in 2009, the company still can keep its percentage as 1.9 of total assets because the company's big scale and long history. But the highest percentage in 2009 also can tell us goodwill and intangible assets plays more important role because of the financial crisis during this period.

In chart 4.2, we can become conscious of the reality that total current assets are occupied more than 50 percent over total assets during the selected 5 years. But in 2009, total current assets only occupies half of the total assets, which means the proportion of long-term assets is increasing this year, because the net income in 2009isnegative which was mentioned in Table 4.1, so it results in the decrease of cash or short-term investments.

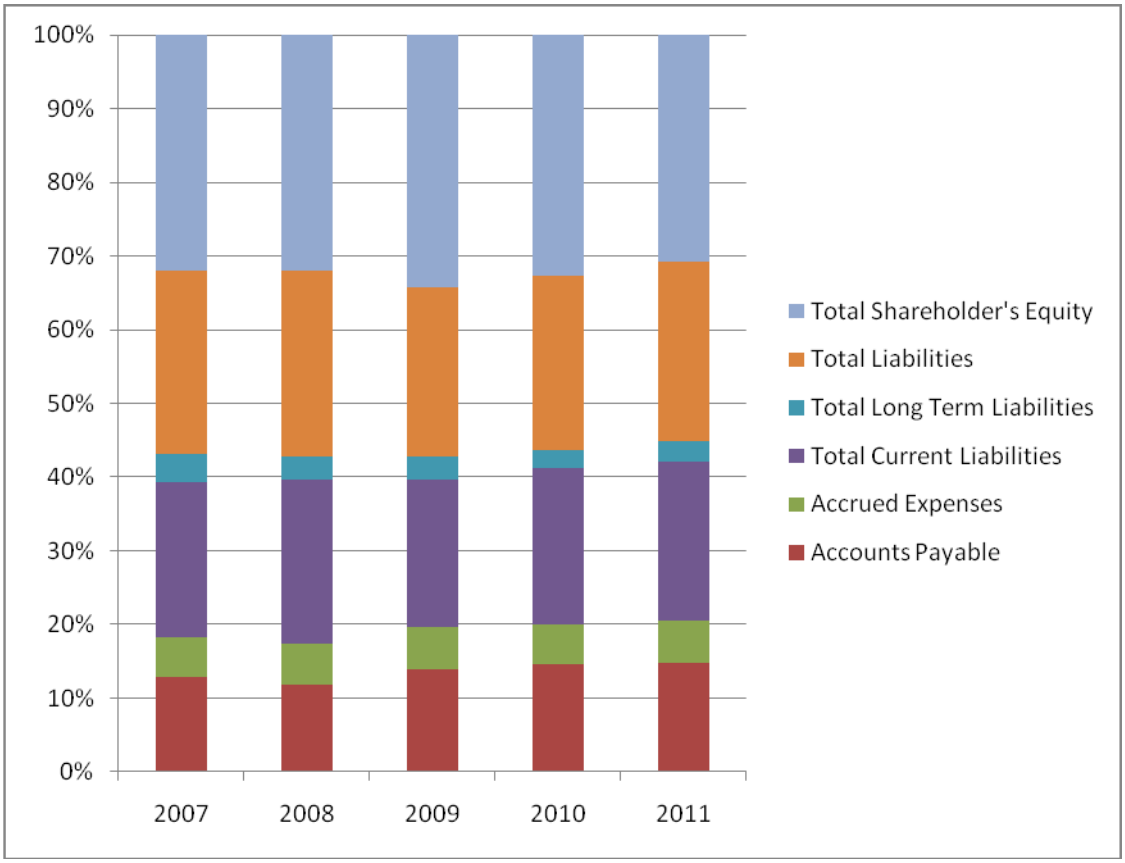
Then we will use the same method to restate the company's liability and equity to be aware of the Magna International Inc.'s capital structure.

Table 4.3 Vertical common-size analysis of the balance sheet (liabilities and equity)

Year	2007	2008	2009	2010	2011
Accounts Payable	22.8%	20.8%	24.4%	25.8%	27.0%
Accrued Expenses	9.5%	9.7%	10.0%	9.9%	10.4%
Total Current Liabilities	36.9%	38.6%	35.0%	37.4%	39.0%
Total Long Term Liabilities	6.8%	5.6%	5.2%	4.6%	5.1%
Total Liabilities	43.7%	44.2%	40.2%	42.0%	44.1%
Total Shareholder's Equity	56.3%	55.8%	59.8%	58.0%	55.9%
Total Liabilities &Shareholder's equity	100.0%	100.0%	100.0%	100.0%	100.0%

From table 4.3, current portion of long-term debt has a high percentage in first two years relative to the rest three years. Due to the Magna International Inc.'s aim to strength its reserve to expand business and investment, accounts payables are stable, the differences between each year are lower than 2 percent from 2007 to 2011. Because of the lower sales, the total current liabilities in 2009 has a lowest percentage about 35 percent, but in the next three years, the current liabilities starts to go up stably. It is obvious to notice that total shareholder's equity occupies the higher proportion than total liabilities. Even the lowest year is 55.8 percent, which is more than 50 percent of total liabilities and shareholder's equity. So, we can know that Magna International Inc. operates its own money more than borrowing money from the bank. It must benefit by abundant capital base and long history culture. Here is a chart of the vertical common-size analysis of liabilities and equity as follows, which you can more clearly find the differences and changes between each year.

Chart 4.3 Vertical common-size analysis of the balance sheet (liabilities and equity)



Here you can see the internal structure of 2009 is a little bit different compared to other 4 years. The total shareholder's equity is much more than total liabilities in 2009. In general, each item over these 5 years is almost stable, does not change too much.

4.12 Horizontal common-size analysis

In horizontal common-size analysis, the year of 2007 will be regarded as base year, and then we will restate the next four years relative to 2007. Results are shown in the Table 4.4 as follows:

Table 4.4 Horizontal common-size analysis of income statement

Year	2007	2008	2009	2010	2011
Cost of Revenue	100%	92.8%	69.5%	92.6%	112.4%
Gross Profit	100%	78.5%	48.2%	91.6%	96.5%

Selling, General, & Admin. Expense	100%	90.3%	86.3%	91.7%	96.9%
Depreciation & Amortization	100%	100.1%	84.5%	75.8%	78.7%
Total Operating Expenses	100%	92.9%	71.0%	91.9%	110.3%
Income Before Extraordinary& Disc. Operations	100%	45.4%	-35.2%	119.0%	127.8%
Net Income	100%	10.7%	-74.4%	146.8%	153.1%
Total Revenue	100%	90.9%	66.6%	92.4%	110.3%

From table 4.4, we can see compared to total revenue in 2007, only in 2011 the company's total revenue increased by 10.3 percent during these five years. Unluckily, going through the cost of revenue and total revenue in this period, it is not hard to notice that the percentage of cost of revenues are always a little bit higher than total revenue, which means Magna International Inc. hasn't been enough efficient to get profit from its sales. During 2008 and 2009, all items are decreasing relative to 2007, it is because the economic environment were not good in these two years and Magna tried to do something survive in this financial crisis such as reducing the cost of revenue, which directly influences the decrease of total revenue. We can see from the change of net income in first three years, it dropped down terribly from 100 percent to -74.4 percent, but the company succeeded in increasing its net income in next 2 years with very high percentage about 146.8 percent and 153.1 percent, which means Magna's capital was growing in last two years. This is exactly good news for Magna itself.

Table 4.5 Horizontal common-size analysis of assets

Year	2007	2008	2009	2010	2011
Cash &Short Term Investments	100.0%	93.3%	45.2%	71.3%	44.9%
Receivables	100.0%	70.9%	76.9%	93.5%	110.5%
Inventory	100.0%	98.0%	102.4%	112.8%	121.7%

Other Current Assets	100.0%	81.8%	120.8%	109.1%	245.5%
Total Current Assets	100.0%	83.8%	71.9%	90.0%	92.9%
Net Property, plant &equipment	100.0%	85.9%	88.5%	90.3%	98.4%
Long Term Investments	100.0%	69.3%	85.0%	98.9%	156.4%
Goodwill & Intangibles	100.0%	93.8%	91.5%	98.8%	96.7%
Other Long Term Assets	100.0%	104.5%	109.3%	82.6%	79.3%
Total Long Term Assets	100.0%	88.8%	91.3%	91.4%	99.4%
Total Assets	100.0%	86.0%	80.2%	90.6%	95.7%

The results of Magna International Inc.' horizontal common-size analysis of assets from 2007 to 2011 is shown in table 4.5. Let's take a look at net property, plant and equipment, we can see it keeps increasing over these five years, even in 2009 when many other items are decreasing, that's why total long-term assets has increased faster than total assets. From 2008 to 2011, the receivables have increased up to 110.5 percent, which means the company sold some products such as stock or bond to get some more cash during these years. We also can tell from the decrease of cash and short-term investment over these 5 years. From 2008 to 2011, inventory keeps going up from 98.0 percent to 121.7 percent. Even in 2009, the cash and short-term inventory is very low, the company had a relatively higher inventory and other current assets which successfully makes total current assets not too low in this year. Finally, the total assets have a little bit decrease but in the last 2 years it is going back up even they are still lower than 100 percent. But we can see the company made a hard try and got a good reaction.

Table 4.6 Horizontal common-size analysis total liabilities and shareholder's equity

Year	2007	2008	2009	2010	2011
Current Portion of Long Term Debt	100.0%	42.0%	4.3%	6.7%	6.7%
Accounts Payable	100.0%	78.6%	85.9%	102.7%	113.4%

Accrued Expenses	100.0%	88.2%	84.8%	94.2%	104.9%
Total Current Liabilities	100.0%	90.0%	76.0%	91.9%	101.2%
Total Long Term Liabilities	100.0%	70.3%	61.7%	60.7%	72.2%
Total Liabilities	100.0%	86.9%	73.8%	87.0%	96.7%
Total Shareholder's Equity	100.0%	85.2%	85.2%	93.3%	94.9%
Total Liabilities & Shareholder's Equity	100.0%	86.0%	80.2%	90.6%	95.7%

Normally, a company's shareholder's equity can judge its ability to make profit. From table 4.6, we can see the total shareholder's equity both are 85.2 percent in 2008 and 2009, which is 14.8 percentage points of decrease relative to 2007. This is because the company in these three years made a loss, but we can see after 2009, the percentage of shareholder's equity were going up, which means Magna's ability to make profits was getting better. We also can see Magna's total liabilities were decreasing from 100 percent to 73.8 percent over first three years, but it's getting back to 96.7 percent in 2011. All in all, the total liabilities and shareholder's equity are lower than 2007's, from 2008 to 2011, but we can't deny the fact that the total liabilities and shareholder's equity are increasing slowly but stably from 2009 to 2011.

By means of horizontal analysis, some trends over time have been identified as to the balance sheets and income statement items. More detailed results can be obtained by the use of financial ratio analysis which is included in the next chapter.

4.2 Financial ratio analysis

Financialratio analysis calculates financial ratios which are based on the company's financial statements (Annexes 1-3). The main item which will be used includes revenue, total assets, total liabilities, equity and so on. It is presented in the following table.

4.2.1 Liquidity ratios

A) Current ratio

Table 4.7 Current ratio

Year	2007	2008	2009	2010	2011
Total Current Assets	8.77	7.35	6.30	7.89	8.15
Total Liabilities	6.70	5.83	4.94	5.83	6.48
Current ratio	1.31	1.26	1.28	1.35	1.26

From table 4.7, we can see that from 2007 to 2008, these ratios are all between 1 and 2, not strong, but during these five years, current ratio doesn't change too much, it means the company has a stable ability to repay its bills.

B) Quick ratio

Table 4.8 Quick ratio

Year	2007	2008	2009	2010	2011
Cash & Short Term Investments	2.954	2.757	1.334	2.105	1.325
Receivables	3.981	2.821	3.062	3.722	4.398
Total Current Liabilities	5.658	5.093	4.299	5.200	5.724

According to the table 4.8 and formula 2.2, the quick ratio can be calculated as follows.

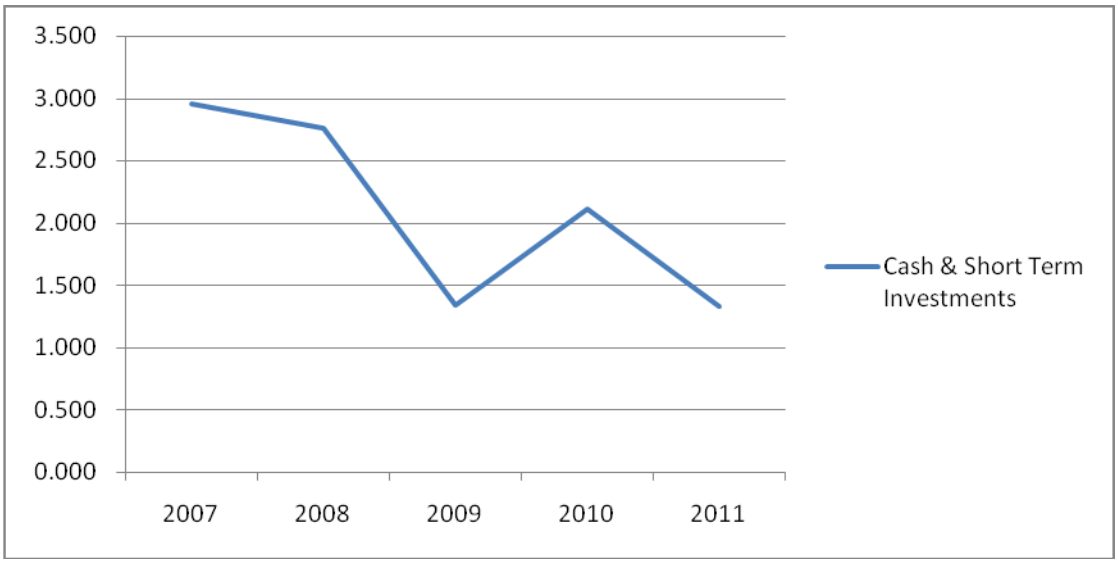
Table 4.9

Year	2007	2008	2009	2010	2011
Quick Ratio	1.226	1.095	1.023	1.121	1.000

Generally, we can see the quick ratio is going down through these years, which means the cash is getting out of the company. Let's have a look at the first two years, the main reason for 13 percentage points decrease from 2007 to 2008 is that Magna

International Inc. purchased a new company whose name is Su Xing appliances in Zhang Jiawan in China. So more cashes or other current assets were getting out of the company at that time[5].

Chart 4.4 Cash and short-term investments ($ Billions)



As a result, the Magna International Inc.' short-term debt-servicing ability has become weaker. On the other hand, it is because of its China strategy somehow. The ratio can be shown as follows.

C) Cash ratio

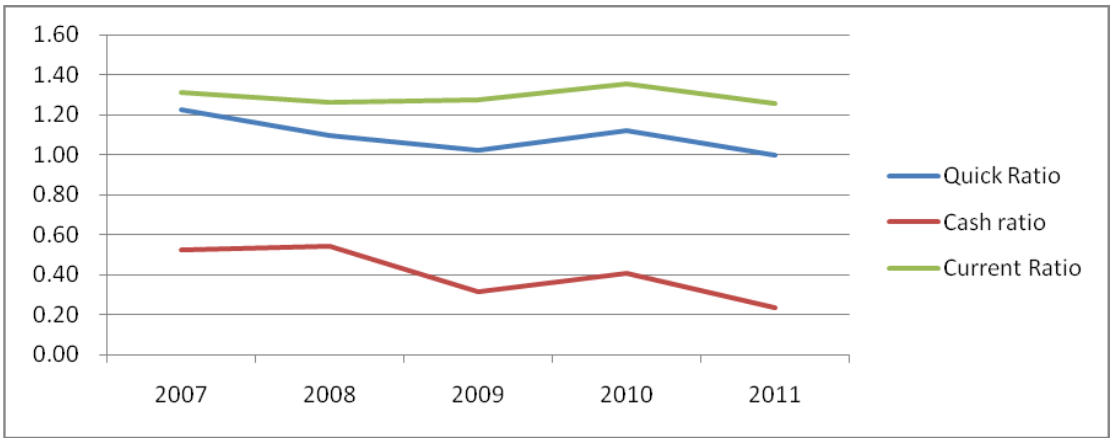
Table 4.10

Year	2007	2008	2009	2010	2011
Cash ratio	52.2%	54.1%	31.0%	40.5%	23.1%

From table 4.9, we talks about Magna's purchasing strategy in 2008, so the cash ratio in 2009 is low, which causes creditors do not want to make too much debt from this company.The same thing happened in 2011, MGA purchased the factory in An Hui province in China, and so it caused the decrease of cash ratio.

[5]http://auto.gasgoo.com/news/2009/01/2208161816185062752.shtml

Chart 4.5 Liquidity ratios



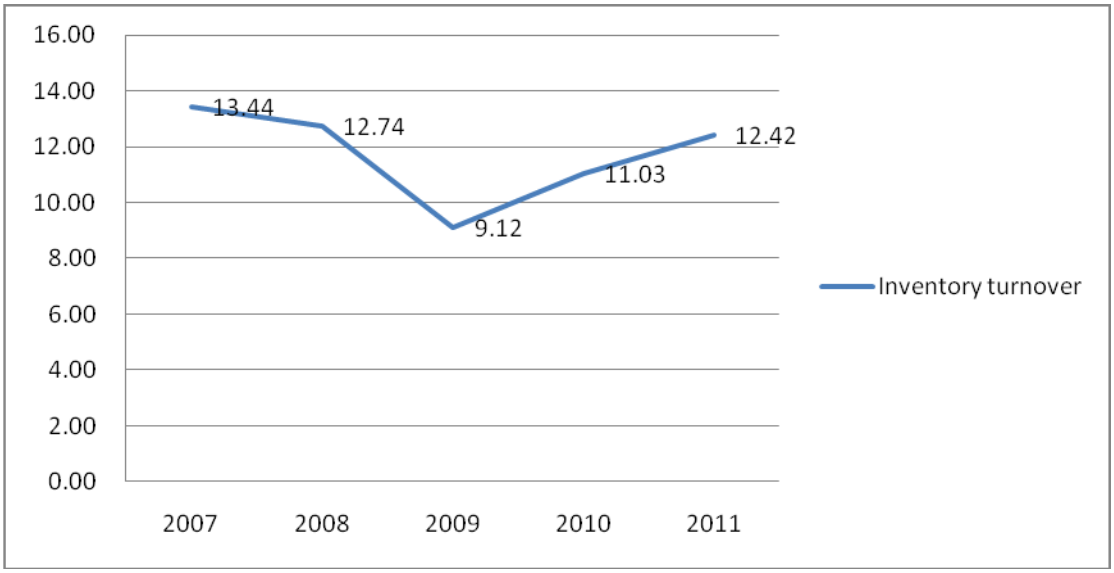
In chart4.5, we can see that these three ratios are relatively stable, which indicates that the company has the ability to repay debt in short-term.

4.2.2 Activity ratios

A) Inventory turnover

To calculate inventory turnover, the items cost of revenue and inventory must be taken into account. Then, by using formula 2.4, we can get the inventory turnover.

Chart 4.6 Inventory turnover



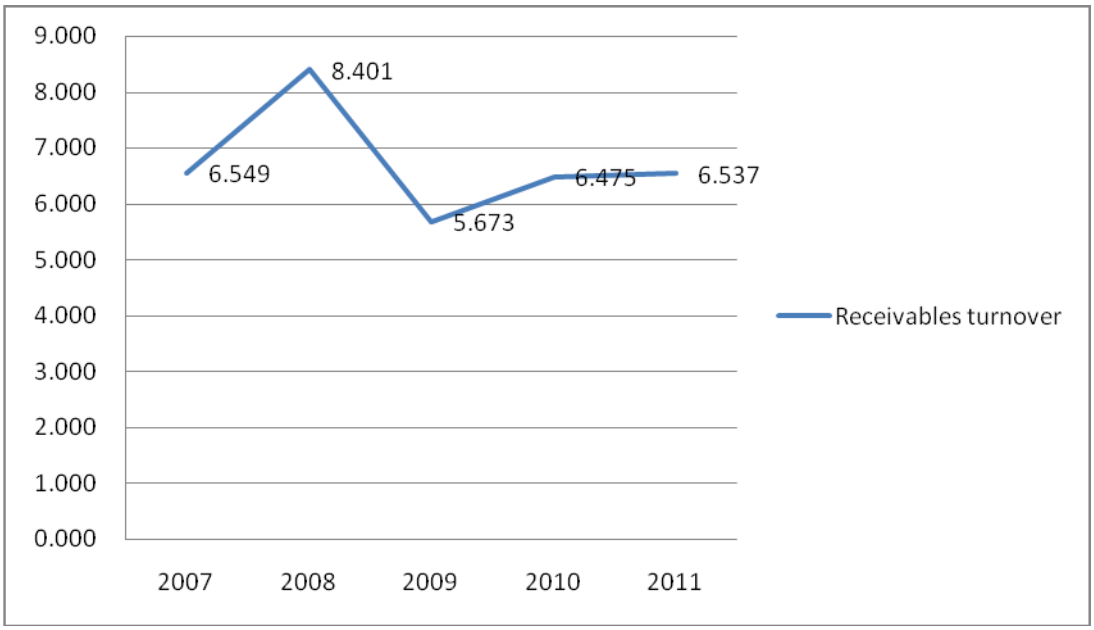
From chart 4.6, we can see the inventory turnover of Magna International Inc. has decreased from 2007 to 2009, after that, it went up stably every year.

The reason why it decreased so much in 2009 is that financial crisis had a bad influence on demand for purchasing goods.

B) Receivables turnover

We can use formula 2.5 to calculate the receivables turnover, the revenue and receivables will be used as follows. We can see generally, the level of receivables turnover is about 6, but in 2008 it is very high with 8.401. This is because Magna wanted to survive in financial crisis, so in order to get some capital; the company sold some products such as bonds or stocks. In chart 4.7, it is very clear to see the big difference in 2008 compared to other 4 years.

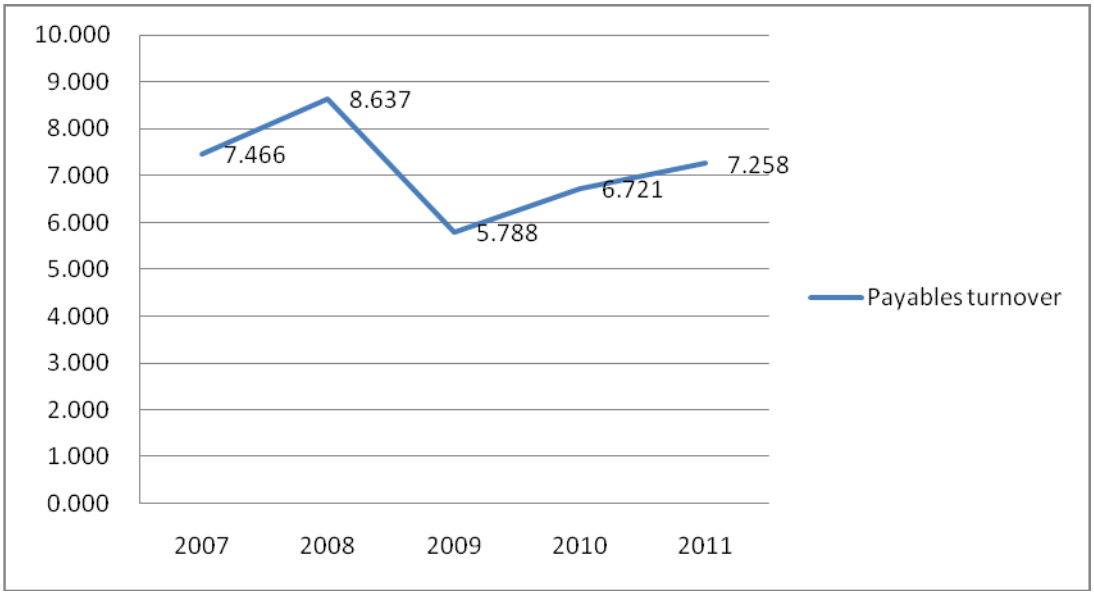
Chart 4.7 Receivables turnover



C) Payables turnover

Considering the MGA's operating activities, we need to use formula 2.6 to know what exatly are in this period formulation. More details in chart 4.8.

Chart 4.8 Payables turnover



From chart 4.8, we can easily notice that payables turnover has decreased from 2008 to 2009, which means the company was spending much longer at paying off its suppliers 2009 than paying off in 2008.

D) Working capital turnover

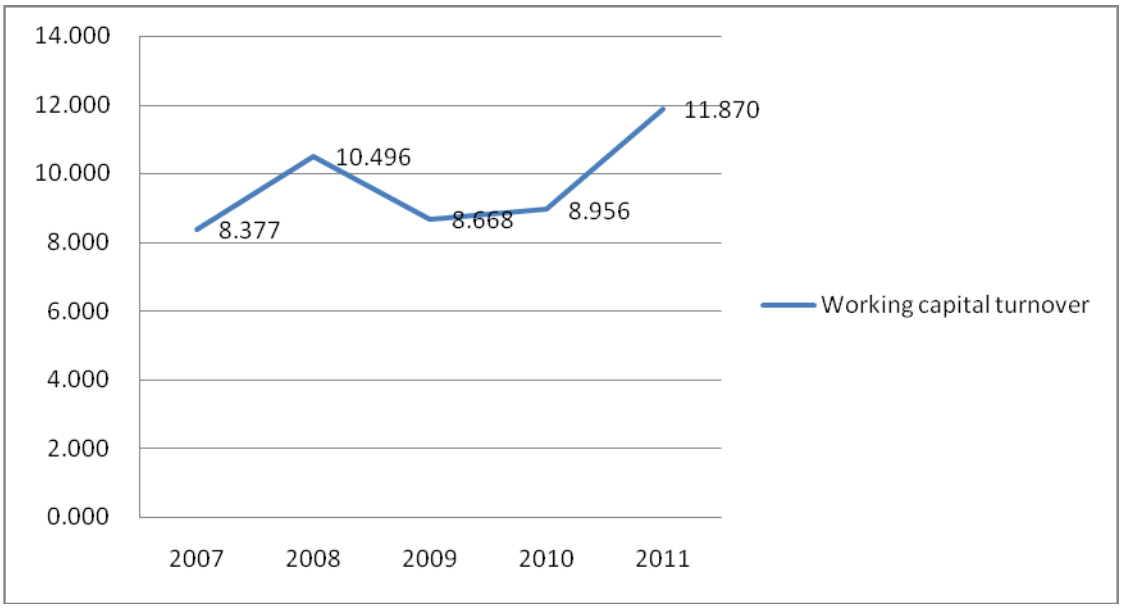
Taken formula 2.7 into account, we can quickly draw a chart to see the changes of working capital turnover from 2007 to 2011. But firstly, we need to pay attention to the current assets and current liabilities.

Table 4.12 Working capital

Year	2007	2008	2009	2010	2011
Total Current Assets	8.770	7.351	6.303	7.891	8.146
Total Current Liabilities	5.658	5.093	4.299	5.200	5.724
Working Capital ($ billions)	3.112	2.258	2.004	2.691	2.422

So, until we know the company's working capital, it is not difficult to calculate the working capital turnover and draw the chart as follows.

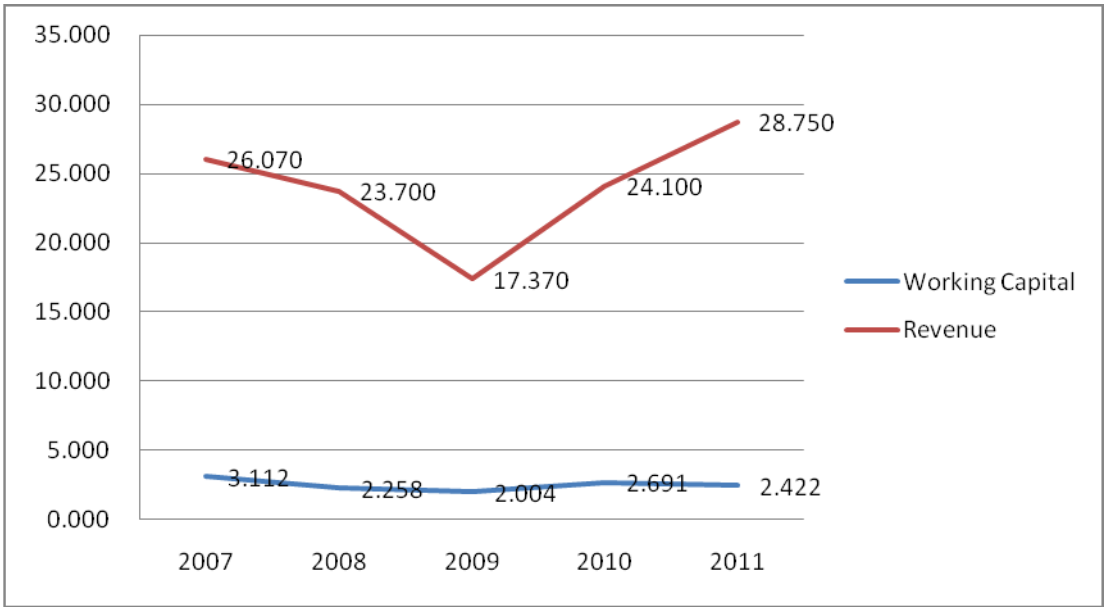
Chart 4.9 Working capital turnover



In chart 4.9, in general, the working capital turnover has increased, especially it reaches the highest points nearly 11.870 within 5 years, it can tell us the more sales the company generated compared to the money which is used to fund the sales in 2011.

If we put the growth of working capital and total revenue together, it would be clearer to realize the trends and how high the proportion is each year during this period.

Chart 4.10 Development of working capital and total revenue ($ Billions)

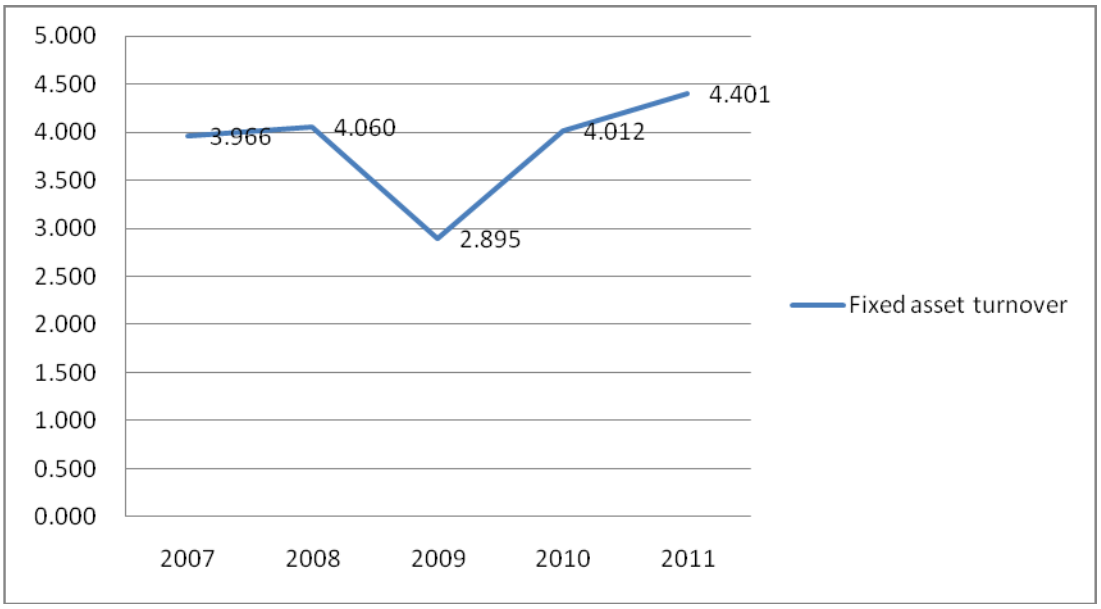


From above, it is easy to notice that working capital during these five years is very stable, but revenue in 2009 is relatively very low, it only has 17.370 billion dollars. So that's why the working capital turnover is very low as well in 2009. The development corresponds with the account payable and receivable in 2009 both experienced a large drop. The situation has improved a lot after 2009.

E) Fixed asset turnover

In order to know Magna International Inc.'s ability to generate net sales from fixed-assets investments, we need to use formula 2.8 to calculate it.

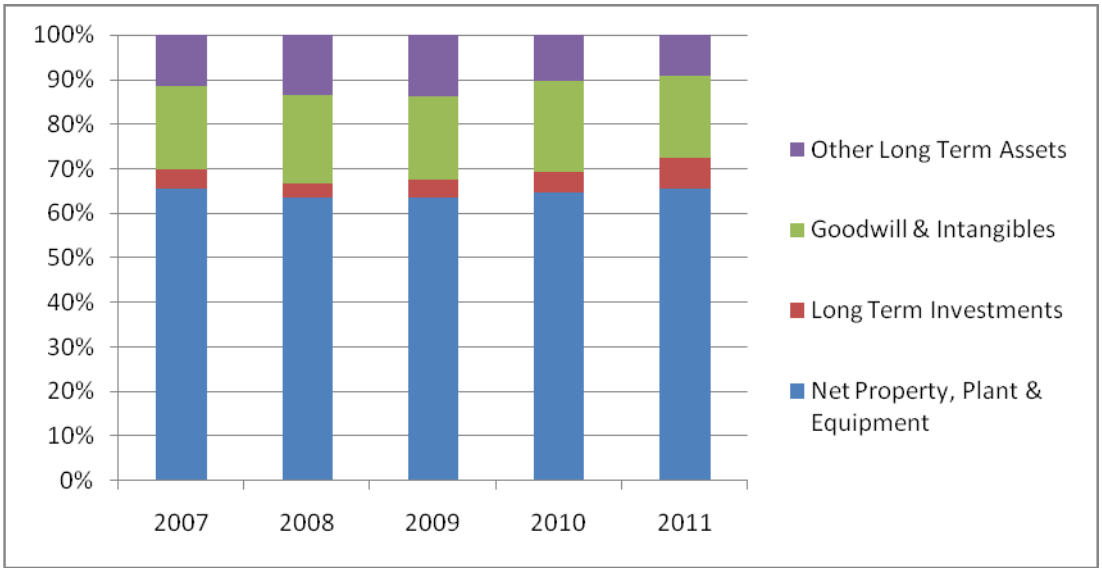
Chart 4.11 Fixed asset turnover



From 2007 to 2008, the fixed asset turnover is stable at nearly 4, but (see chart 4.11), in the next year, the fixed asset turnover dropped down terribly, but from 2009 to 2011, it has increased a lot. So, we can know after financial crisis, the company has been more effective in using investments in fixed assets to make revenues, even much more effective than the ratio in 2007.

In order to figure out which item matters most in fixed asset, especially why in last three years, the fixed asset turnover is going up so fast, the chart 4.12 will be shown as follows.

Chart 4.12 Fixed assets



So, from chart 4.12, we can see the long term investment has been increased from 2009 to 2011, while other items are almost the same, which caused the increase of the fixed asset turnover in last three years.

F) Total asset turnover

Considering the formula 2.9, we can know the Magna International Inc.'s overall efficiency of assets to sales by drawing the table 4.13.

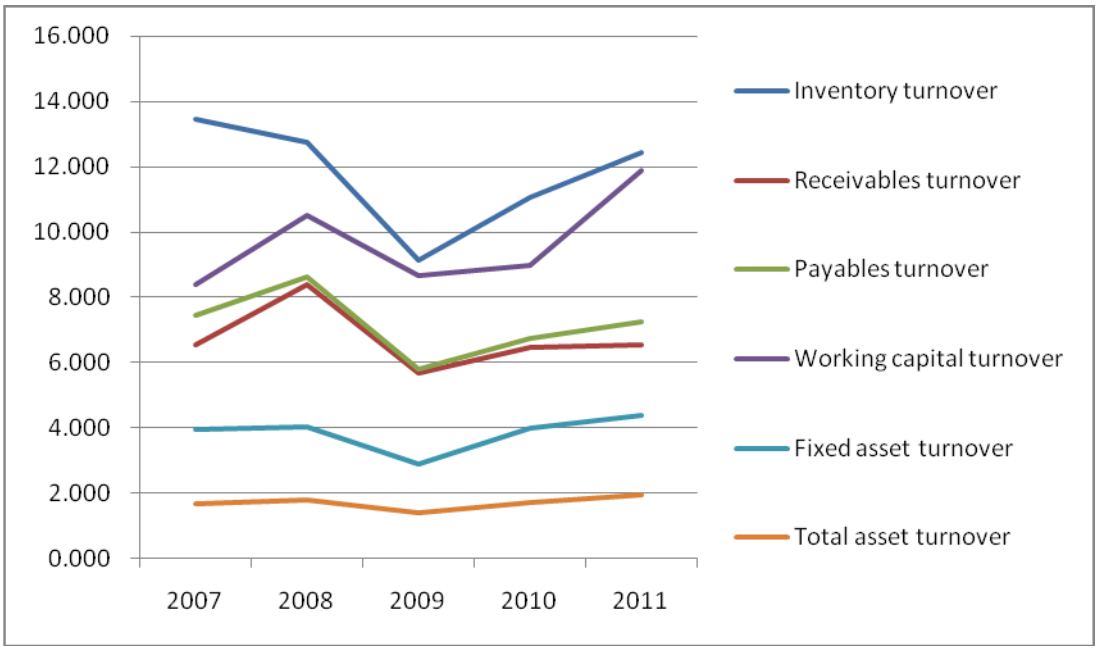
Table 4.13

Year	2007	2008	2009	2010	2011
Total asset turnover	1.699	1.797	1.412	1.734	1.958

Compared to chart 4.11, 2011 always has the highest ratio, which means long term assets matters most in total assets. In general, the total asset turnover is relatively stable from 2007 to 2011.

Let's have an overall look at the activity ratios from chart 4.13 as follows.

Chart 4.13 Activity ratios



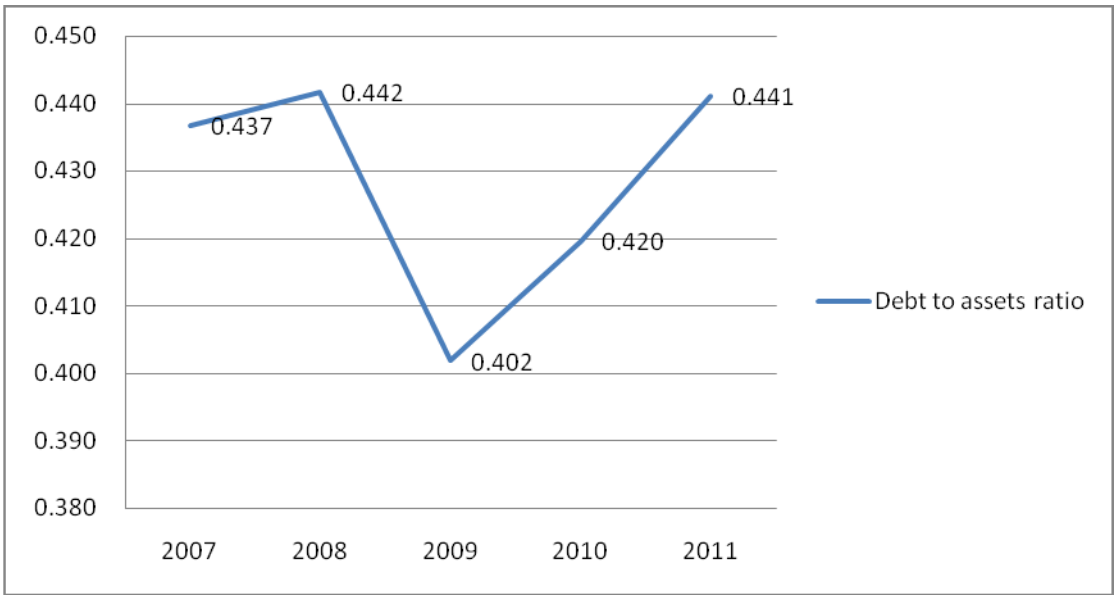
From chart above, we can the inventory turnover is the most changeable in activity ratios. All in all, the financial crisis in 2009 more or less influenced each items in activity ratios.All ratios' trends are increasing except the receivable turnover. Anyway, it should be a good situation for the company.

4.2.3 Leverage ratios

A) Debt to assets ratio

In chart 4.14, the debt to assets ratio has increased, the change is very small, so it was very stable at that time. But in 2009, the ratio dropped down relatively quickly by about 4 percentage points. This is because a lot of banks were faced with bankruptwhich was caused by financial analysis, so the Magna International Inc. did not want borrow enough money from the bank. That is also why we can see after financial crisis, the financial environment were getting better, so the debt to assets ratio in 2010 and 2011 have increased quickly but stably by about 2 percentage points. Using formula 2.10 to get debt to assets ratio:

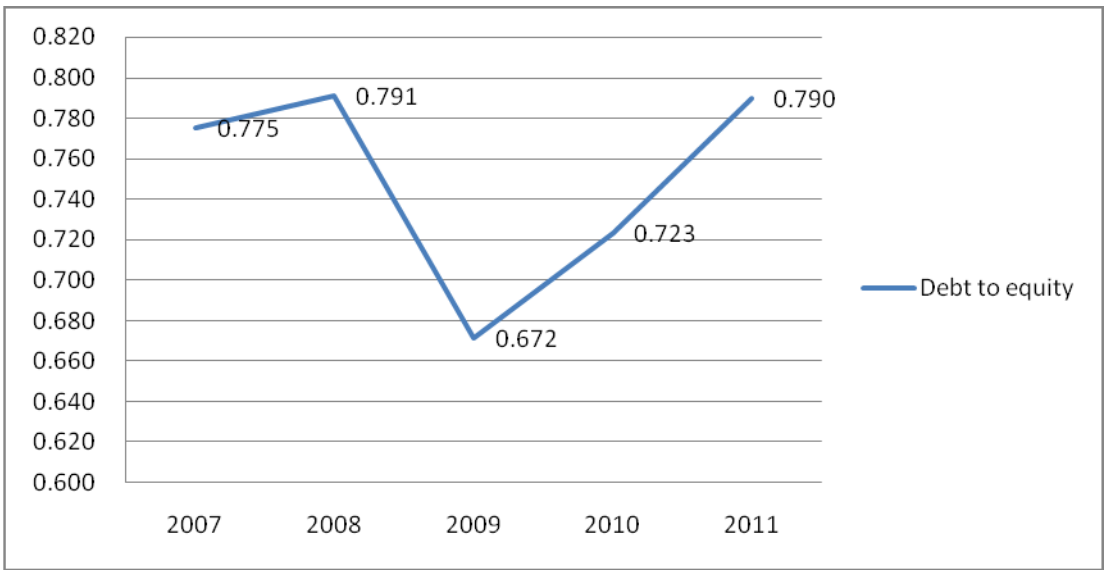
Chart 4.14 Debt to assets ratio



B) Debt to equity

We can use formula 2.11 to calculate the company's debt to equity and draw chart 4.15.

Chart 4.15 Debt to equity



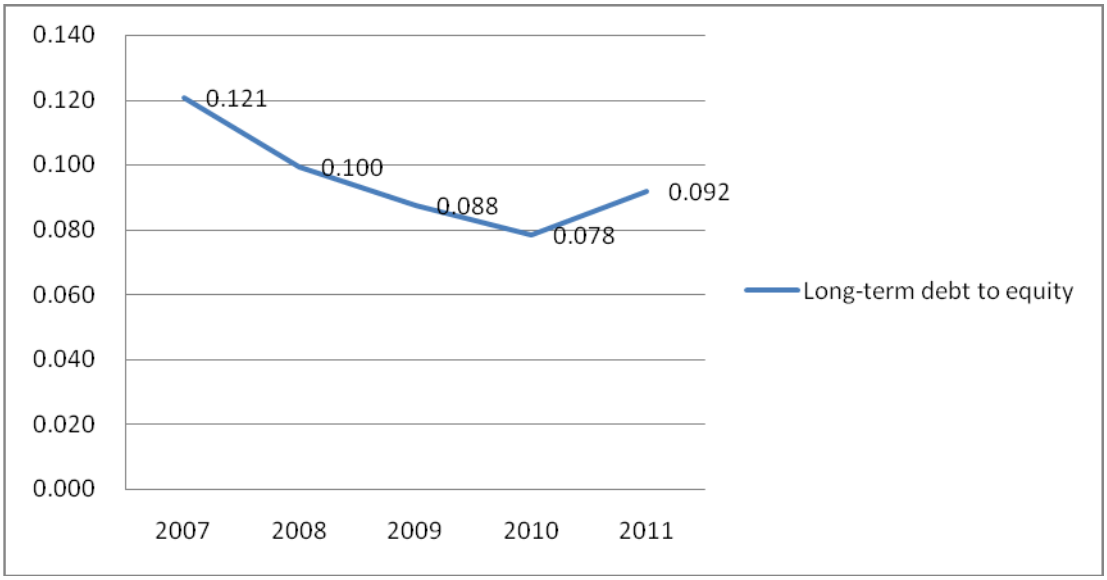
In chart 4.15, we can find that the debt to equity ratio has increased in most years because of the total debt grew faster than total shareholder's equity. However, the ratio has decreased by 12 percentage points in 2009, which was because of a big growth of net income in this year led to the total shareholder's equity increased so

much.

C) Long-term debt to equity

Taken formula 2.12 into account, we can get the chart 4.16 as follows.

Chart 4.16 Long-term debt to equity



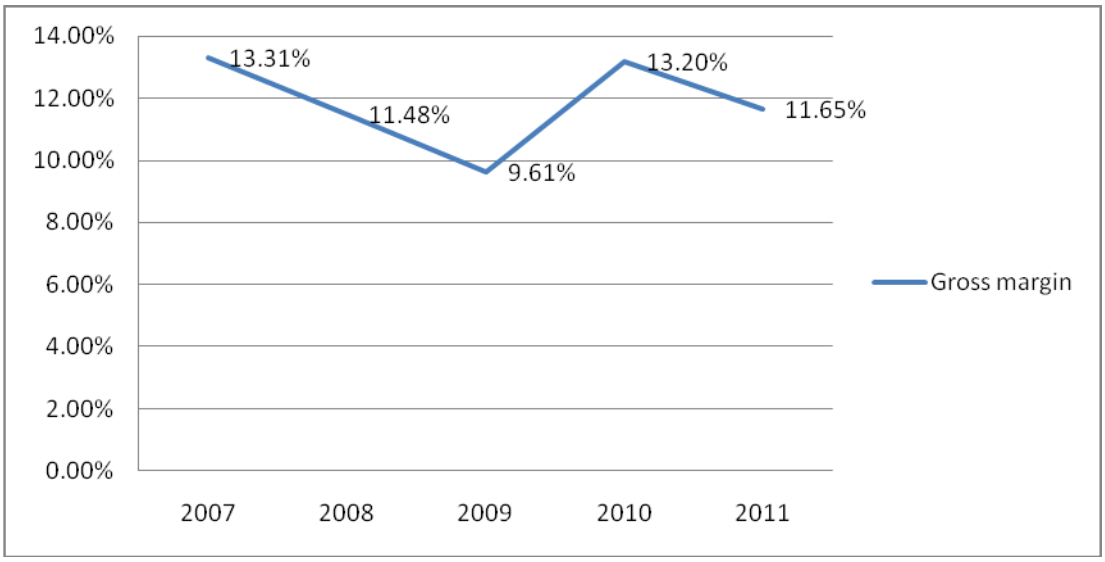
In general, the level of long-term debt to equity over these years are low, and from 2007 to 2010, it keeps going down, which means during the first four years the company's long-term debtors were decreased due to the lower sales. In 2011, the ratio has increased by 1.4 percentage points, so it can tell us the company was a better-managed company with a relatively debt exposure compared the first four years.

4.2.4 Profitability ratios

A) Gross margin

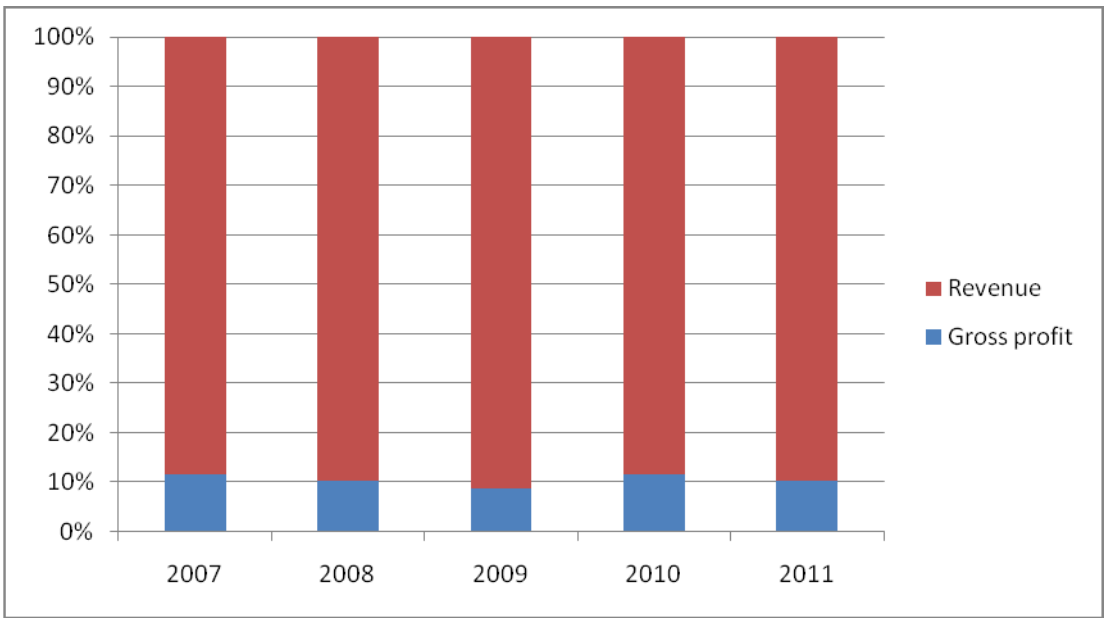
Using the formula 2.13, we can calculate the data and draw a chart as follows.

Chart 4.17 Gross margin



Based on chart 4.17, the company's gross margin has increased only in 2010. Even the ratios in this period didn't change a lot, but generally they are all under 15 percentage points, which means the company did not have a good enough profitability in this period.

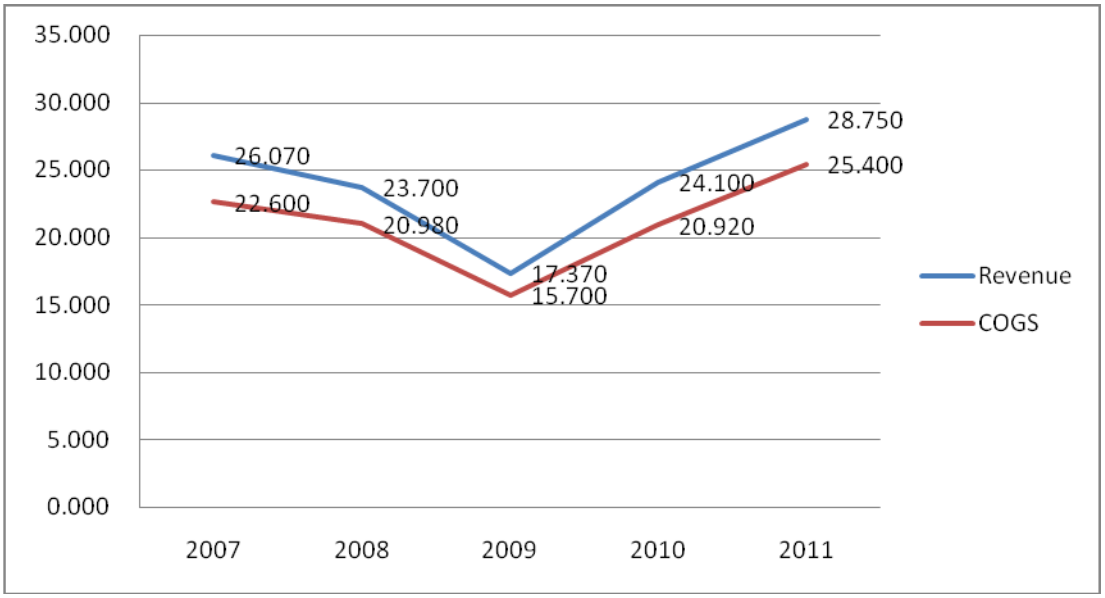
Chart 4.18 Total revenue and gross profit



In order to make it clearer that why the ratio has increased in 2010, we can see from chart 4.18, the company got the highest gross profit in this period compared to other four years, this is due to the MGA had a strategy in China and purchased some small

companies and industries in 2008 and 2009, as time went by, the new companies started to make profits.

Chart 4.19 Annual changes of total revenue and COGS



Generally, the trend of these two items are almost the same, but there still has some difference, for example, revenue has increased by nearly 7 billion dollars while COGS (Cost of goods sold) only has 5 billion dollars increased, that's why we can see in chart 4.17 that gross margin is positive in 2010.

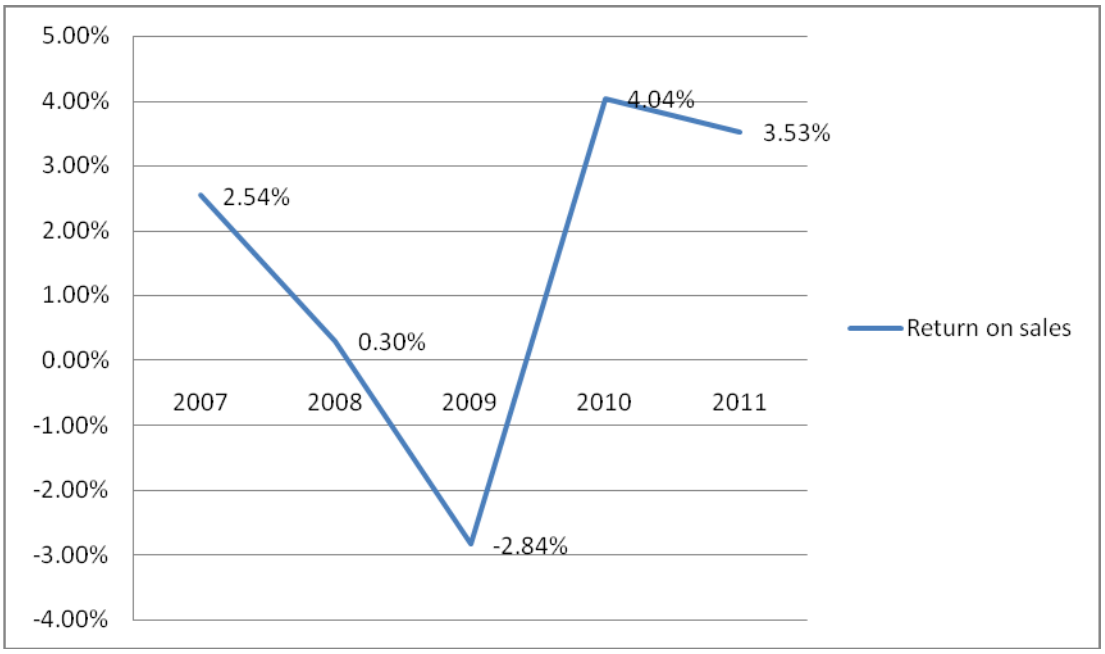
In general, in this period, because of the financial crisis and the company's new Asian strategy, the company did not make a profit.

B) Return on sales

From the formula 2.14, we can easily calculate the ratio in this period.

In chart 4.20, only in 2010, the company's return on assets has increased with a high percentage by about 7 percentage points. It can tell us the company in this year growing more operational efficient. In other words, we can tell the company was facing with financial crisis trouble in 2009.

Chart 4.20 Return on sales



C) Return on assets

Using the formula 2.15 to get the return on assets as:

Table 4.14

Year	2007	2008	2009	2010	2011
Net Income ($ Billions)	0.663	0.071	-0.493	0.973	1.015
Total Assets ($ Billions)	15.340	13.190	12.300	13.900	14.680
Return on assets (%)	4.32%	0.54%	-4.01%	7.00%	6.91%

Firstly, from chart 2.15, we can see the total assets during this period is relatively stable, but net income changed a lot over these years, especially a negative data in 2009. This is because the company made a lot of investments in 2008 and 2009. Based on the increase of ratios in last two years, it can show us the company invested less, but received more.

D) Pretax return on assets

With the data in table 4.15, we can use formula 2.16 to get the ratio of pretax return on assets:

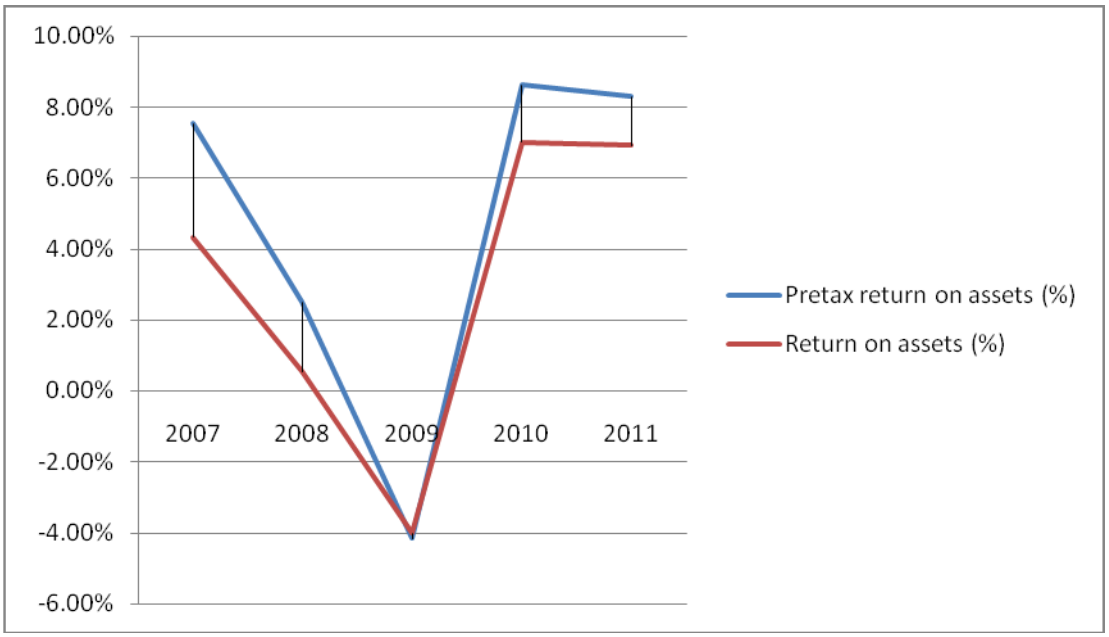
Table 4.15 Pretax return on assets

	2007	2008	2009	2010	2011
Pretax return on assets	7.51%	2.49%	-4.15%	8.61%	8.29%

Here we can see the ratio is negative in 2009, which has the same reason with return on assets: the company made a lot of investments in that year. But in 2010, we can see the big change that the ratio goes up fast from -4.15 percentage points to 8.61 percentage points.

Then we can put table 4.14 and table 4.15 together in chart 4.21 to see the difference between these two ratios.

Chart 4.21 Pretax returns on assets and return on assets

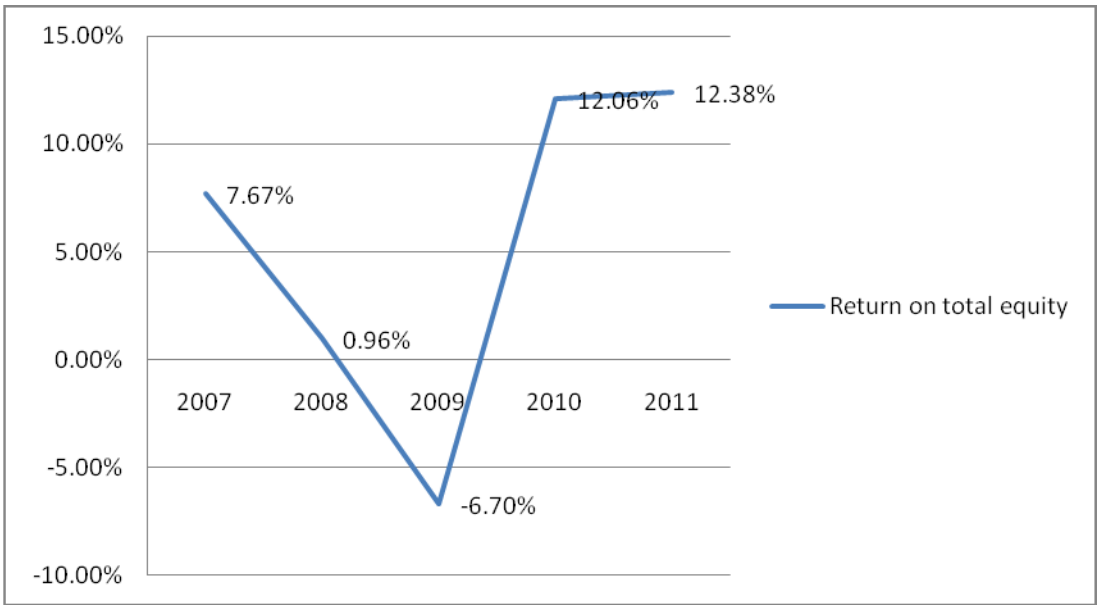


In chart 4.21, we can notice that in 2010, the pretax return on assets has increased faster than the return on assets which means the company has got a relatively heavy tax burden.

E) Return on total equity

We can use formula 2.17 to calculate the return on total equity.

Chart 4.22 Return on total equity



Just like what was mentioned above, 2008 and 2009 are the years for investments, so we can see the ratios are very low from chart 4.22, especially in 2009, the ratio is only -6.7 percentages, the reason is the company used the money that shareholders invested in to purchase small companies which could not survive in financial crisis and achieve its Asian strategy, so it results the decrease of net income.

4.3 DuPont Analysis

We had calculated lots of ratios of Magna International Inc., now we can use DuPont analysis to have an overall study of these.

By using DuPont analysis, we will have a better understanding of a company's returns within given period. In this part, at the beginning, we will get ROA which is the abbreviation of return on assets, this ratio can be divided into return on sales and asset turnover, and then we will consider the net profit margin which includes tax effect, effect of non-operating items and operating profit margin. After we discuss all of these, we will put the ROA and financial leverage together (see chapter 2) as ROE, the abbreviation of return on equity.

Table 4.16 DuPont analysis

Year	2007	2008	2009	2010	2011
Tax effect (1)	0.576	0.216	0.965	0.803	0.834
Effect of non-operating items (2)	1.015	0.619	1.558	1.017	0.977
Operating profit margin (3)	0.044	0.022	-0.019	0.049	0.043
Net profit margin (4)=(1)*(2)*(3)	0.025	0.003	-0.028	0.040	0.035
Total assets turnover (5)	1.699	1.797	1.412	1.734	1.958
Return on assets (6)=(4)*(5)	0.043	0.005	-0.040	0.069	0.069
Financial leverage (7)	1.775	1.791	1.671	1.723	1.790

According to table 4.16 and formula 2.19, we can calculate the return on equity (ROE) and know the difference between each year. Let's have a look at table 4.17 as follows:

Table 4.17 Return on equity

Year	2007	2008	2009	2010	2011
Return on equity (8)=(6)*(7)	0.077	0.010	-0.067	0.119	0.124

In table 4.17, the return on equity of Magna International Inc. was decreasing very quickly from 2007 to 2009, going from 0.077 to -0.067, it indicates that the business owners invested capital can't get high profitability and high efficiency of financial and management activities which are including corporate financing, investment, asset operation; but there is a good sign that after 2009, the ROE has increased quickly and kept a relatively high level in 2010 and 2011.

Just like what is mentioned above, the return on equity can be divided into two big parts which are return on assets and financial leverage. So, from table 4.16, we can clearly see actually the financial leverage of Magna during this period is stable, but return on assets changes a lot, which directly influenced the return on equity a lot. On

the other hand, this reality can tell us in this period, especially in 2009, the company spent lots of money on investments.

4.4 Analysis of gradual changes

Table 4.18

Year	2007	2008	2009	2010	2011
Return on equity	0.077	0.010	-0.067	0.119	0.124
Absolute change	X	-6.7%	-7.7%	18.6%	0.5%
Index of change	X	0.126	-6.946	-1.779	1.039

In table 4.18, we can see the absolute change of ROE is negative in 2008 and 2009, the index of change from 2008 to 2009 has decreased and after that year, it has increased.

As we know, the influence quantification includes four methods which are methods of gradual changes, methods of decomposition with surplus, logarithmic decomposition method and functional decomposition method. In this work, we will only pay attention to one method, whichis a method of gradual changes.

According to the formula 2.20 and table 4.18, we can calculate the change of component ratios in each period as follows.

Table 4.19Method of gradual changes from 2007 to 2008

	a2007	a2008	Δa	Δx_{ai}	Order
$a_1 = EAT/Revenue$	0.025	0.003	-0.022	-6.77%	3
$a_2 = Revenue/Assets$	1.699	1.797	0.097	0.05%	1
$a_3 = Assets/Equity$	1.775	1.791	0.016	0.01%	2
Sum	X	X	X	-6.71%	X

As is evident in the table 4.21, the net profit margin has decreased by 2.2 percentage

points from the year 2007 to 2008, and the growth of total assets turnover and financial leverage which are $a_2$anda_3, had increased by 9.7 and 1.6 percentage points. As for using formula 2.20, the method of gradual changes is shown in the table. It is clear for us to see that total assets turnover has contributed most to the ROE changes, and the second influential element is financial leverage, the last one is net profit margin which has a negative influence on ROE.

Table 4.20Method of gradual changes from 2008 to 2009- use the same format of the table as table 4.19, also other tables below

	a2008	a2009	Δa	Δx_{ai}	order
a_1	0.003	-0.028	-0.031	-10.10%	3
a_2	1.797	1.412	-0.385	1.96%	1
a_3	1.791	1.671	-0.120	0.48%	2
Sum	X	X	X	-7.66%	X

From this table, three items all have decreased from 2008 to 2009, which caused the sum of the changes among these two years are negative. However, total assets turnover has contributed most to the ROE by 1.96 percentage points, while the financial leverage ranks the second level with a positive point about 0.48 percent.

Table 4.21 Method of gradual changes from 2009 to 2010

	a2009	a2010	Δa	Δx_{ai}	order
a_1	-0.028	0.040	0.068	16.11%	1
a_2	1.412	1.734	0.322	2.14%	2
a_3	1.671	1.723	0.052	0.36%	3
Sum	X	X	X	18.61%	X

Thanks to the high net profit margin in 2010, we can see a_1 has contributed most to

the ROE. The total assets turnover did not change a lot in this year, so it ranked the second level by nearly 2.14 percent points. In general, the sum of the gradual changes from 2009 to 2010 has a positive effect on ROE.

Table 4.22 Method of gradual changes from 2010 to 2011

	a2010	a2011	Δa	Δx_{ai}	order
a_1	0.040	0.035	-0.005	-1.37%	3
a_2	1.734	1.958	0.225	1.37%	1
a_3	1.723	1.790	0.066	0.46%	2
Sum	X	X	X	0.46%	X

In this table, we can see the net profit margin has decreased by 0.5 percentage points from 2010 to 2011, so it has the lowest effect on ROE compared to other two elements. Because of the stable increase of the total assets turnover, it turns back to the most part again by 1.37 percent points.

All in all, from the analysis of gradual changes, we can see from 2009 to 2010, the net profit margin was the most important ratio to contribute to the growth of ROE. However, in other periods, the total assets turnover played the most important role in contributing to the ROE change.

5 Conclusion

Magna International Inc. is one of the most diversified automotive suppliers in the world. And now, they are paying much more attention to the Chinese market. From 2007 to 2011, the general development of this company was in a good condition except the year of 2009. But after the financial crisis, the company's net income and revenue grew up quickly, which can tell us Magna had a power ability to face with crisis and made a good Asian tragedy to survive successfully from crisis.

In common-size analysis we can know that during the chosen period, the net income in 2009 was negative.The company made a loss at that time because of the worsening economic and industry conditions which became apparent in the second half of 2008 and accelerated the deterioration in the financial condition of a number of OEMs and suppliers, culminating in the bankruptcy filings of Chrysler and General Motors in April and June, respectively. It is obvious to find that goodwill and intangible assets played more important role in 2009.

The chapter focusing on the financial ratio analysis was divided into four parts. The first part is liquidity ratio part which during these 5 years the company had a stable ability to repay its bills, but lots of current assets were out of the company in 2008 because MGA's activity in China. Unluckily, the Magna International Inc.' short-term debt-servicing ability has become weaker in this period. The second part is activity ratio, which shows us the revenue in 2009 was very low and inventory turnover is the most changeable in activity ratios. The third part is leverage ratio; the debt to assets ratio was not good in first two years in this period because of the financial crisis. The last part is profitability ratio, in general, the gross margin in this period is lower than 20 percentage points even there has a increase in 2010, it can tell us the company did not have a good enough profitability in this period. And in 2008 and 2009, the company made a lot of investments but after that, the company started to invest less,

but receive more.

From the DuPont analysis, we can figure out the financial leverage of Magna during this period is stable, but return on assets changes, which directly influenced the return on equity a lot. On the other hand, this reality can tell us in this period, especially in 2009, the company spent lots of money on investments.

Considering the analysis of gradual changes, we can know the changes between two years. From 2007 to 2008, 2008 to 2009 and 2010 to 2011, total assets turnover has contributed mostly to the change of ROE. However, net profit margin played the most important role in affecting ROE from 2009 to 2010.

The overall results of this study suggests that even Magna company is a big and old-line company, but they still should pay attention to its liquidity and profitability due to lots of current assets were out of the company and low profits the company made from 2007 to 2011. Besides, due to the global fuel prices rising, Magna needs to research or create new energy according to the customers' demand, which can make their products or services more competitive in order to make more profits. All in all, Magna company should not only expand its business in China, but also research or create new energy to make itself more and more competitive.

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List of Abbreviations

MGA	Magna International Inc.
OEMs	Original Equipment Manufacturers
ROA	Return on Assets
ROE	Return on Equity
COGS	Cost of Goods Sold
EBIT	Earning before Interest and Tax
EAT	Earning after Tax

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- I am informed that Act No. 121/2000 Coll. – the Copyright Act, in particular, Section 35
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Ostrava dated 3rd May, 2013

Bo Peng

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Bo Peng

List of Annexes

Annex 1

Income statement ($ Billion)

Year	2007	2008	2009	2010	2011
Revenue	26.070	23.700	17.370	24.100	28.750
Cost of Revenue	22.600	20.980	15.700	20.920	25.400
Gross Profit	3.468	2.722	1.670	3.178	3.347
Selling, General, & Admin. Expense	1.461	1.319	1.261	1.340	1.415
Depreciation & Amortization	0.872	0.873	0.737	0.661	0.686
Total Operating Expenses	24.930	23.170	17.700	22.920	27.500
Operating Income	1.135	0.530	-0.328	1.177	1.246
Non-Operating Income	0.017	-0.202	-0.183	0.020	-0.029
Pretax Income	1.152	0.328	-0.511	1.197	1.217
Provision for Income Taxes	0.489	0.257	-0.018	0.236	0.202
Income after Tax	0.663	0.071	-0.493	0.961	1.015
Minority Interest	0.000	0.000	0.000	-0.012	0.000
Income Before Extraordinaries& Disc. Operations	0.846	0.384	-0.298	1.007	1.081
Net Income	0.663	0.071	-0.493	0.973	1.015

Annex 2

Balance sheet ($ Billion)

Assets	2007	2008	2009	2010	2011
Cash & Short Term Investments	2.954	2.757	1.334	2.105	1.325
Receivables	3.981	2.821	3.062	3.722	4.398
Inventory	1.681	1.647	1.721	1.896	2.045
Other Current Assets	0.154	0.126	0.186	0.168	0.378
Total Current Assets	8.77	7.351	6.303	7.891	8.146
Net Property, Plant & Equipment	4.307	3.701	3.811	3.889	4.236
Long Term Investments	0.28	0.194	0.238	0.277	0.438
Goodwill & Intangibles	1.237	1.16	1.132	1.222	1.196
Other Long Term Assets	0.749	0.783	0.819	0.619	0.594
Total Long Term Assets	6.573	5.838	6	6.007	6.533
Total Assets	15.34	13.19	12.3	13.9	14.68
Liabilities	2007	2008	2009	2010	2011
Current Portion of Long Term Debt	0.374	0.157	0.016	0.025	0.025
Accounts Payable	3.492	2.744	3.001	3.586	3.961
Accrued Expenses	1.455	1.283	1.234	1.371	1.527
Other Current Liabilities					0.044
Total Current Liabilities	5.658	5.093	4.299	5.2	5.724
Total Long Term Debt	0.337	0.143	0.115	0.046	0.046
Other Long Term Liabilities	0.646	0.559	0.51	0.498	0.626
Total Long Term Liabilities	1.043	0.733	0.644	0.633	0.753
Total Liabilities	6.701	5.826	4.943	5.833	6.477
Shareholder's Equity	2007	2008	2009	2010	2011
Common Stock, Net	3.708	3.605	3.613	4.335	4.373
Additional Paid-in Capital	0.058	0.067	0.063	0.085	0.063
Retained Earnings	3.526	3.357	2.843	2.725	3.317
Treasury Stock	0	0	0	0	0
Other Shareholder's Equity	1.35	0.334	0.841	0.92	0.449
Minority Interest	0	0	0	0.074	0
Shareholder's Equity	8.642	7.363	7.36	8.065	8.202
Total Liabilities & Shareholder's Equity	15.34	13.19	12.3	13.9	14.68

Annex 3

Cash flow ($ Billion)

Operating Activities					
Fiscal year is January-December	2007	2008	2009	2010	2011
Net Income before Extraordinaries	0.711	0.075	0.562	1.030	1.010
Depreciation, Depletion & Amortization	0.935	0.931	0.841	0.676	0.758
Depreciation and Depletion	0.935	0.931	0.841	0.676	0.758
Amortization of Intangible Assets	-	-	0.000	-	-
Deferred Taxes & Investment Tax Credit	0.132	0.140	0.064	0.027	0.075
Deferred Taxes	0.132	0.140	0.064	0.027	0.075
Investment Tax Credit	-	-	0.000	0.000	0.000
Other Funds	0.295	0.551	0.366	0.092	0.132
Funds from Operations	1.810	1.420	0.708	1.770	1.820
Extraordinaries	0.000	0.000	0.000	0.000	0.000
Changes in Working Capital	0.101	0.293	0.107	0.160	0.624
Receivables	0.039	0.811	0.046	0.388	0.899
Accounts Payable	0.070	0.693	0.275	0.567	0.470
Other Assets/Liabilities	0.037	0.102	0.237	0.012	0.034
Net Operating Cash Flow	1.710	1.120	0.601	1.930	1.200
Investing Activities	2007	2008	2009	2010	2011
Capital Expenditures	0.999	0.789	0.717	0.768	1.220
Capital Expenditures (Fixed Assets)	0.795	0.789	0.717	0.768	1.220
Capital Expenditures (Other Assets)	0.204	0.000	-	0.000	0.000
Net Assets from Acquisitions	0.049	0.169	0.057	0.109	0.119
Sale of Fixed Assets & Businesses	0.117	0.069	0.034	0.282	0.277
Purchase/Sale of Investments	0.000	0.247	0.259	0.153	0.194
Purchase of Investments	0.000	0.247	0.259	0.153	0.194
Sale/Maturity of Investments	0.000	0.000	0.000	0.000	0.000

Other Uses	0.000	0.000	0.000	0.094	0.000
Other Sources	0.000	0.000	0.000	0.000	0.000
Net Investing Cash Flow	0.932	1.130	0.999	0.843	1.260
Financing Activities	2007	2008	2009	2010	2011
Cash Dividends Paid - Total	0.141	0.149	0.024	0.103	0.234
Common Dividends	0.141	0.149	0.024	0.103	0.234
Preferred Dividends	0.000	0.000	0.000	0.103	0.000
Change in Capital Stock	0.243	0.264	0.002	0.283	0.344
Repurchase of Common & Preferred Stk.	1.430	0.264	-	0.330	0.403
Sale of Common & Preferred Stock	1.670	0.000	0.002	0.049	0.058
Proceeds from Stock Options	1.670	0.000	0.002	0.000	0.058
Other Proceeds from Sale of Stock	0.000	0.000	0.000	0.049	0.000
Issuance/Reduction of Debt, Net	0.055	0.508	1.300	0.059	0.136
Change in Current Debt	-	-	-	0.008	0.000
Change in Long-Term Debt	0.055	0.508	1.300	0.050	0.136
Issuance of Long-Term Debt	0.030	0.886	0.006	0.023	0.159
Reduction in Long-Term Debt	0.085	0.378	1.310	0.073	0.024
Other Funds	0.000	0.000	0.001	0.012	0.010
Other Uses	0.000	0.000	0.001	0.012	0.030
Other Sources	0.000	0.000	0.000	-	0.020
Net Financing Cash Flow	0.047	0.095	1.330	0.457	0.452
Exchange Rate Effect	0.322	0.296	0.103	0.005	0.037
Miscellaneous Funds	0.000	0.000	0.000	0.000	0.000
Net Change in Cash	1.150	0.210	1.620	0.629	0.550
Free Cash Flow	0.774	0.187	0.140	1.060	0.259